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HISTORY REPEATS ITSELF

The American Veterinary Medical Association has just completed its sixty-sixth annual meeting, a most successful affair. This recent meeting, held in Detroit, was the second largest that the Association has ever had. Approximately 1350 attended. The work of the local committee is to be highly commended. Everything went off with clock-like regularity and the weather man aided by furnishing delightful climatic conditions. The vanguard began to assemble on Sunday, August 11, and on Monday there were many of the old guard and some neophytes in attendance.

On Monday evening, Secretary Hoskins called the official delegates of the state and provincial associations together, for an "experience" meeting. During the past year President Munce made a very determined effort to bring about a closer relationship between the various state veterinary associations and the national organization. This was touched on in his presidential address. At this conference of delegates, experiences were exchanged in regard to membership in the American Veterinary Medical Association in the respective states, and also in respect to publicity campaigns put on by various state organizations. These meetings are of great value, and should by all means be continued. The efforts to bring about closer relationship was shown to have a definite effect, as a committee was authorized by the Executive Board of the A. V. M. A., to draw up definite recommendations

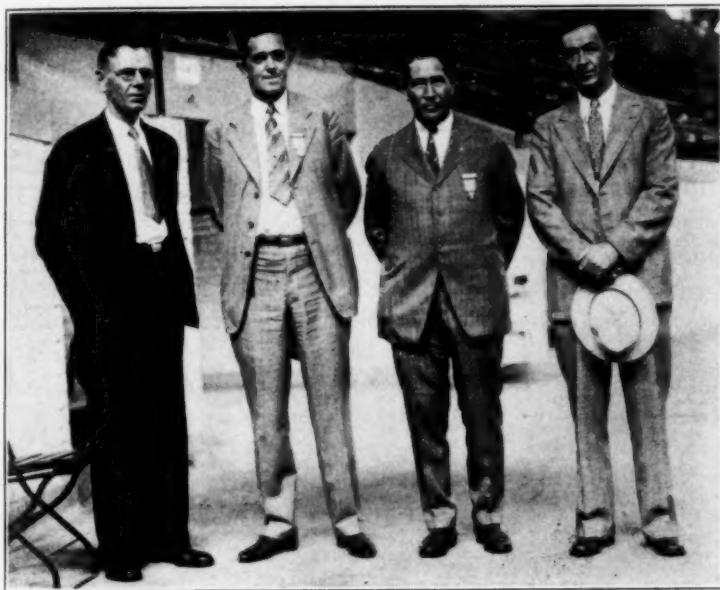
in respect to this matter. Next year will see a step forward in this very important affiliation.

The convention was called to order at 10:00 a. m., August 13, in the Crystal Ball Room of the Book-Cadillac Hotel, by President T. E. Munce. Honorable H. C. Powell, Commissioner of Agriculture, of Lansing, Michigan, gave the address of welcome for the State. He said he was a "pinch hitter" for Governor Green. Mr. Powell pointed out some of the features in regard to the great state of Michigan, especially in respect to its agriculture and its manufactures. Honorable John C. Nagel, president of the Common Council and Acting Mayor of Detroit, followed Mr. Powell, welcoming the members of the Association on behalf of the city of Detroit. Mr. Nagel spoke particularly in regard to the education of the children of Detroit. He stated that Detroit now offers facilities for the education of the youth, from the time they enter the kindergarten until they finish a professional course in engineering, medicine or other lines. Mr. Nagel also stated that he had a warm affection in his heart for veterinarians, as in his early years, he had been a horseshoer, and in this way had come into close contact with the profession. These addresses of welcome were ably responded to by Dr. George Hilton, Veterinary Director General of Canada. Dr. Hilton pointed out that the veterinary profession has changed rapidly in the past few years, due to changes in transportation, but that the profession was even more necessary at the present time than ever before, in order to preserve the health of the animal and human population.

At the afternoon general session, Secretary Hoskins reported that the Association now has the largest membership in its history. In 1920 the Association had nearly as many members as at the present time. Many, however, were dropped from the rolls during the next few years, but 1927, 1928 and 1929 has seen a steady increase. During the past year both California and Pennsylvania have added more than 100 members each to their rolls. Secretary Hoskins discussed at length the financial status of the Association, and pointed out that \$3.00 of the \$5.00 dues goes to support the JOURNAL, and that the remaining \$2.00 is alone available for strictly Association matters. This sum has not been sufficient to pay for all the activities of the organization during the past two years. The JOURNAL account, however, has shown a nice balance. He raised the question as to whether dues would not necessarily have to be increased. This was

brought before the Association later in the meeting, by an amendment to the Constitution, offered by Dr. C. A. Cary, of Alabama, proposing that the dues be increased to \$8.00 a year. This was presented for consideration and comes up next year for adoption or rejection.

Last year an amendment to the Constitution was adopted, providing for the election of officers by ballot during the second day of the meeting. The minds of the members of the Association were apparently well crystallized this year, for Dr. T. H. Ferguson, of Lake Geneva, Wisconsin, was unanimously elected to the



A QUARTET OF WELL-KNOWN CALIFORNIA VETERINARIANS AT THE A. V. M. A. CLINIC AT DETROIT

(Left to right) Dr. F. W. Wood, Berkeley; Dr. W. L. Curtis, Los Angeles; Dr. L. M. Hurt, Los Angeles; and Dr. J. A. Howarth, Davis.

presidency for the year 1929-30. This bespeaks the popularity of Dr. Ferguson, who is one of our foremost practitioners. The new ballot-box will have to wait for active use at a later date.

The vice-presidents and treasurer also were unanimously elected. Major R. A. Kelser of the United States Army, at Washington, D. C., was elected first vice-president; Dr. James T. Glennon, of Newark, New Jersey, second vice-president; Dr. F. P. Caughman, of Columbia, South Carolina, third vice-president; Dr. J. A. Barger, of Des Moines, Iowa, fourth vice-president; and

Dr. E. A. Watson, of Ottawa, Canada, fifth vice-president. Dr. M. Jacob, of Knoxville, Tennessee, was unanimously re-elected treasurer.

An invitation to hold the 1930 meeting in Kansas City was extended by Dr. A. T. Kinsley. Dr. George H. Hart, of the University of California, also invited the Association to hold the next meeting in Los Angeles. It was voted to hold the next meeting in the California metropolis, so a "trek" west is in prospect.

Tuesday evening was the time set apart for the meeting of the college alumni associations. About a dozen of these groups assembled and had dinner together informally. These meetings are of great value in bringing together graduates who have not met for many years.

The president's reception and dance following was held in the Grand Ball Room. President and Mrs. Munce, assisted by members of the local committee, received those in attendance. It was a highly delightful affair. The music was splendid. It was rendered by one of the few orchestras that we have been privileged to hear in later days, that really could play an old-fashioned waltz. Some of us, you know, danced in the days when the waltz was considered to be in style, and it was a real treat, to be able again to trip the "light fantastic" to music that carried one back to the days of "more and darker hair."

On Wednesday, there were meetings of the various sections. We believe that the scientific program presented at Detroit was one of the best that has ever been presented before the Association. An innovation was tried by Secretary Hoskins and he deserves a great deal of credit for the way it worked out. For years it has been a matter of disappointment to many of those attending the meetings, that they could not hear more of the papers in the various sections. A chart was posted in each section room, on which appeared the numbers of the papers that were being presented in each of the other sections. As the papers were presented and others appeared on the program, the numbers were changed, so that one attending any section could know just what paper was being presented at the time, in any of the other sections.

On Wednesday afternoon there was a general session which was addressed by Professor James E. Rice, of Cornell University, on "The State's Obligation to the Poultry Industry." This was followed by reports of committees. Some familiar faces were

missing from this session. There was another drawing card in town. "Babe" Ruth and his aggregation of New York Yankees were crossing bats with the Tigers. Those who attended the ball game on Wednesday afternoon were destined to see a truly remarkable exhibition of our national game. It is not often that as many features of baseball are illustrated in a single game as there were in this contest. The score ended in favor of the home team.

In the evening was the banquet, which was a most successful affair. Dr. M. J. Smead and his committee are deserving of much praise for this most enjoyable occasion. It was one of the largest banquets in the Association's history. More than 450



View of the A. V. M. A. Clinic in Coliseum, State Fair Grounds, at Detroit

sat down to the festive board and with excellent music supplied by the orchestra, a mighty good time was had by all. Dean P. A. Fish (we nearly said Doctor, as his deanship is of such late acquisition) was the toastmaster. Few people are gifted with the art of presiding as is Dean Fish. His droll witticisms, his apt introductions and, beyond all, his knowledge of veterinary medicine, were demonstrated in his "toast mastership."

Dr. H. H. Halladay, secretary of the Michigan State College, East Lansing, responded to the toast, "In and Out of the Veterinary Profession." Dr. Halladay has an honorary degree in Veterinary Medicine. Our "Sister Profession" was responded to

by Dr. Burt R. Shurly, a member of the medical profession of Detroit. Honorable Charles C. Kellogg, postmaster of Detroit, gave an excellent talk on "The Air Mail." "Uncle Jack" Miner, of Kingsville, Ontario, highly entertained the banqueters with his talk on "Wild Bird Life" and with his pictures taken in his wild-life sanctuary in Ontario. The goose came back to "Uncle Jack." He demonstrated that fully in his movie.

Thursday morning was given over to section meetings. This occasion gave another opportunity to show the value of the plan of scheduling the papers that are going on in the various sections, in each meeting room. In the afternoon a general session was held. Reports of committees were in order. A very determined effort was made to cut down, as far as possible, the length of these reports. The Association has reached the point where there are a large number of very important committee reports. On the other hand, the majority of those attending meetings do not go to hear these committee reports. These can be read in the published proceedings. We believe that it is advisable to proceed even further in cutting the time devoted to committee reports, and that the time saved should be allotted to the sections for the presentation of scientific papers. Some committee reports can be presented in a very few words, and printed in full. The Executive Board announced at this time that they had made a revision of the Executive Board districts, and further that they recommended a change in the Constitution, providing for additional membership on the Executive Board. The number of executive board districts will be increased to ten. Their boundaries will be printed in the JOURNAL at an early date. The Executive Board also recommended that the president and the immediate past president be ex-officio members of the Executive Board. This will make a board of thirteen members.

Thursday evening there was another general session. An excellent film, illustrating the methods of reproduction of the liver fluke, was shown by Drs. J. N. Shaw and B. T. Simms, of the Oregon Agricultural Experiment Station. Dr. J. E. Shillinger, of the Bureau of Biological Survey, had a very interesting film illustrating how to handle foxes. A review of the 1929 outbreak of foot-and-mouth disease was presented by Dr. John R. Mohler, chief of the Bureau of Animal Industry. Dr. Mohler very effectively pointed out the masterly way in which the last outbreak of this dread disease was handled in California. Due in a large measure to the cooperation of local, state and national authorities,

the ravages of this disease were withheld to a very small area. Dr. Mohler stated also that an outbreak of fowl pest in New Jersey has been successfully eliminated. Dr. Maurice C. Hall, chief of the Zoological Division, Bureau of Animal Industry, in his characteristic way, pointed out some of the problems of veterinary parasitology.

After the new officers were installed, adjournment was taken for the clinic, to be held at the Fair Grounds on Friday.

The Coliseum at the State Fair Grounds makes a very excellent place for holding a clinic. The committee had been to a great deal of trouble to install the proper facilities and a large number of cases were presented for operation and diagnosis. Some years



Luncheon at the State Fair Grounds During A. V. M. A. Clinic at Detroit

ago clinics in connection with our veterinary meetings were looked upon as of little if any value towards veterinary education. During the past few years there has been a change in the interest taken in clinics, and we believe that as clinics are now conducted, they do add materially to the benefits that are derived from national and state veterinary meetings. The clinic held at the Fair Grounds contributed a great deal to the knowledge of those in attendance. A clinic is a clearing-house for ideas. You have the opportunity of meeting the operator, demonstrator, or the laboratory worker face to face, and if you do not understand his methods of procedure, you have the opportunity of discussing

the matter with him on the spot. To Dr. E. E. Patterson, of Detroit, and his committee who had charge of the clinic, should go every praise, for assisting materially in the benefits derived from this national meeting.

Approximately 200 stayed over for the automobile trip on Saturday, August 17, to Parkedale Farm, Rochester, and the Detroit Creamery Farms, Mount Clemens. The weather was ideal for the trip.

The entertainment provided for the ladies was most delightful. It included a luncheon and card party at the Book-Cadillac Hotel, a theatre party at the Michigan, and an instructive and enjoyable shopping tour through Hudson's store, where new and novel merchandise displays are in vogue. One day was devoted to a steamer trip to the famous Bob-Lo, and another to a sight-seeing excursion around Detroit, including its business and manufacturing districts, its residential and play-ground areas, and its magnificent boulevards.

The meeting of the Ladies Auxiliary was the largest in attendance ever convened, there being 246 members present. After a short business session, Mrs. W. Horace Hoskins, the founder of the Auxiliary, recalled its inception in 1917 and reviewed its history and growth. A musical entertainment followed.

The work of the local committee, which has in charge the arrangements for national veterinary meetings, is an arduous one. We speak from experience. On the other hand, with the successful completion of a meeting, one thinks back over many happy experiences in connection with planning and executing the arrangements. To Dr. W. N. Armstrong, chairman of the local committee, and the subcommittees, all praise should go. Many of these individuals did not appear prominently, but their work showed in the well-rounded-out program and manner in which this meeting was conducted. To these individuals the Association is very much indebted.

C. P. F.

CONVENTION NOTES

Attendance, 1350.

Los Angeles in 1930.

Ideal weather prevailed all week.

The sectional meetings were unusually well attended.

The practitioners elected another president, Dr. T. H. Ferguson, of Wisconsin.

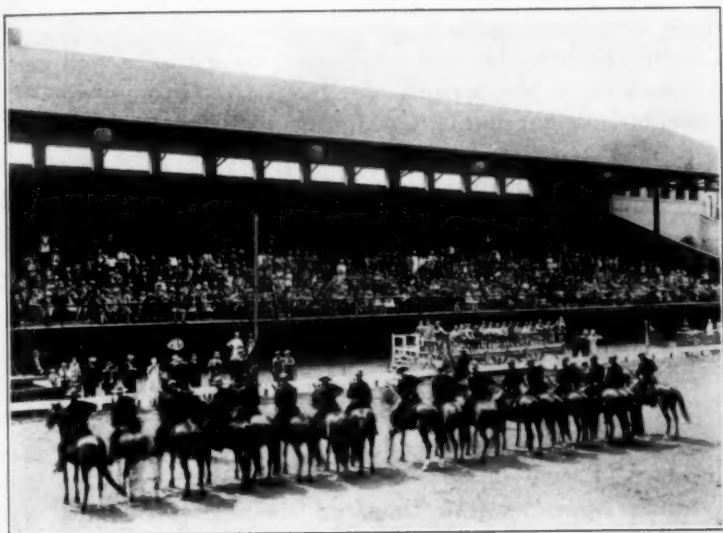
Dr. M. Jacob, of Knoxville, Tenn., was re-elected Treasurer for his twelfth term of office.

Oregon sent her two regulars to the meeting—Drs. W. H. Lytle, of Salem, and B. T. Simms, of Corvallis.

There were 455 at the banquet Wednesday evening. In all probability this is a record for A. V. M. A. banquets.

Connecticut had two members in attendance—Drs. James J. Flaherty, of New Haven, and I. R. Vail, of Bristol.

Florida also has two members in attendance—Drs. G. W. Lewallen, of St. Petersburg, and Wilbur McPherson, of Gainesville.



Detroit Mounted Police Drill During A. V. M. A. Clinic at Detroit

New Hampshire and Rhode Island were the only states east of the Mississippi that did not appear on the registration list.

Dr. H. L. Van Volkenberg, of Mayaguey, Porto Rico, took advantage of the convention to renew many friendships among the members.

Dr. J. Charlton Fitzgerald, of Paia, Maui, Hawaii, had the honor of being the member to travel the longest distance to attend the convention.

Mrs. W. Horace Hoskins, of Philadelphia, attended her 28th A. V. M. A. convention. She attended every meeting held from 1896 (Buffalo) to 1920 (Columbus).

The states west of the Mississippi River which did not have representatives at the meeting were Washington, Montana, Arizona, New Mexico and Louisiana.

Considerably over 200 were registered on Monday, August 12, the day before the official opening of the convention. Committee meetings were the vogue on Monday.

The large number who traveled to Detroit in automobiles is reflected in the fact that only a few over 100 railroad certificates were turned in at the convention.

Alabama was represented by three members—Drs. C. A. Cary and I. S. McAdory, of Auburn, and Clive Daly, of Birmingham. Dr. and Mrs. Daly were making the convention a part of their honeymoon.

North Carolina also was represented by a trio of well-known veterinarians in the persons of Drs. A. A. Husman and Wm. Moore, of Raleigh; and G. C. Monroe, of Greensboro.

Dr. R. P. Lyman, of East Lansing, Mich., who served the A. V. M. A. as Secretary from 1906 to 1910, dropped in during the convention and renewed acquaintances with a host of friends.

Oklahoma had three members in attendance and each was accompanied by his wife. The trio consisted of Drs. E. W. Meads, of Claremore; H. W. Orr, of Stillwater; and C. R. Walter, of Tulsa.

Mississippi had a quartet of regular attendants at the meeting—Drs. William L. Gates, of Clarksdale; O. M. Norton, of Greenville; R. V. Rafnel, of Jackson; and R. H. Stewart, of Indianola.

Virginia appeared four times on the registration list. The quartet consisted of Drs. H. C. Givens and A. J. Sipos, of Richmond; L. E. Starr, of Blacksburg; and E. J. Wills, of Harrisonburg.

Dr. Charles W. Bower, of Topeka, Kans., had the honor of being the first out-of-town member to arrive at the convention headquarters. He arrived on Friday, August 9, accompanied by Mrs. Bower.

South Dakota was represented by a quartet of veterinarians, including Drs. D. L. Cotton, of Beresford; W. F. Joseph, of Iroquois; N. L. Nelson, of Sioux Falls; and Gilbert S. Weaver, of Brookings.

Tennessee was still another state to be represented by a quartet of veterinarians in the persons of Drs. Wm. M. Bell, and J. M. Jones, of Nashville; M. Jacob, of Knoxville; and F. J. Reamsnyder, of Union City.

Over 50 per cent of the applications for membership filed during the past year were received from four states, California, Pennsylvania, Michigan and Texas. Vermont was the only state without a new member.

South Carolina was another state with a trio of veterinarians present. They were: Drs. W. A. Barnette, of Greenwood; F. P. Caughman, of Columbia; and B. C. McLean, of Aiken. Dr. Caughman was elected a vice-president.

Every living ex-president who has served the A. V. M. A. since 1911 was in attendance, including Drs. Mohler, Marshall, Cotton, Moore, Cary, White, Kinsley, Welch, Stange, Merillat, Sigler and Hilty.

Texas reported five Lone Star State members in attendance—Drs. R. C. Dunn, of College Station; Everett B. Jones, of Vernon; N. F. Williams, of Fort Worth; T. J. Worrell, of Pampa; and P. P. Starr, of Gainesville.

West Virginia answered to the roll-call five times, being represented by Drs. F. H. Austin, of Huntington; S. E. Hershey and H. M. Newton, of Charleston; H. B. Langdon, of Charles Town; and L. N. Reefer, of Wheeling.

North Dakota did well to have four members of the profession at the convention in the persons of Drs. R. W. Bernhardt, of Enderlin; W. F. Crewe, of Bismarck; W. Fleenor, of Fairmount; and S. S. Westgate, of Grafton.

Los Angeles and Kansas City were the only bidders for the 1930 convention. The vote was so close that the chair was in doubt and had to call for a count of hands, Los Angeles winning by a margin of 23 votes.

Dr. Teodulo Topacio, of Manila, Philippine Islands, who has been in the United States taking postgraduate work at several institutions during the past year, was highly impressed with the proceeding of the convention.

Maryland had just a half-dozen members registered—Drs. Wm. Geo. Chrisman, of Baltimore; G. A. H. Edmiston, of Easton; James W. Hughes, of Ammendale; and I. K. Atherton, E. M. Pickens and Mark F. Welsh, of College Park.

Massachusetts had a quintet of veterinarians present in the persons of Drs. W. H. Dodge, of Leominster; William H. McNamara, of Worcester; W. J. Meloche, of Spencer; J. D. Pierce, of Springfield; and W. R. Smith, of North Brookfield.

Owing to the fact that there was not a contest for any of the elective offices this year, no opportunity was presented for trying

out the new system of holding elections, as provided in the amendment to the Constitution and By-Laws adopted at Minneapolis one year ago.

Nebraska contributed eight veterinarians to the attendance figures, including Drs. G. H. Anderson, of Holdrege; J. N. Barber, of Exeter; A. C. Drach and Robert J. Foster, of Omaha; C. H. Hays, W. T. Spencer and Carl J. Norden, of Lincoln; and P. Simonsen, of Hooper.

The following veterinarians, who attended the 1929 convention in Detroit, attended the first meeting held in the Motor City, in 1900: Drs. E. B. Ackerman, A. H. Baker, William H. Dodge, Joseph Hawkins, William Henry Kelly, E. C. Porter, Leon N. Reefer and Walter Shaw.

Kentucky sent eight representatives—Drs. Ed. P. Farley, of Paducah; Harry Gieskemeyer, of Fort Thomas; J. O. Greene and G. M. Horton, of Mt. Sterling; F. E. Hull and E. M. Stemmler, of Lexington; Clifford C. Wagner, of Outwood; and W. A. Wallace, of Ashland.

New Jersey sent seven veterinarians to the meeting—Drs. F. R. Beaudette, of New Brunswick; E. R. Cushing, of Plainfield; James T. Glennon and Werner Runge, of Newark; Arthur D. Goldhaft, of Vineland; John B. Hopper, of Ridgewood; and George B. Vliet, of Hackettstown.

Nine of the thirteen veterinary colleges were represented by their respective heads—Drs. Cary, of Alabama; Fish, of Cornell; Giltner, of Michigan; Dykstra, of Kansas; Klein, of Pennsylvania; Stange, of Iowa; White, of Ohio; and McGilvray, of Ontario; and Father Leopold, of Montreal.

Kansas appeared on the registry eight times opposite the following names: Drs. R. G. Baldwin, of Blue Rapids; Charles W. Bower, of Topeka; Capt. C. E. Cook, of Fort Leavenworth; W. M. Dicke, of Paola; R. R. Dykstra, of Manhattan; F. A. Imler, of Kansas City; J. F. Myers, of Bethel; and M. P. Schlaegel of Burr Oak.

Missouri veterinarians turned out well. Kansas City was represented by Drs. H. E. Curry, G. G. Graham, A. T. Kinsley, Ashe Lockhart, C. E. Salsbery and E. R. Steel. Also registered from Missouri were Drs. A. Goodlive, of Marshall; H. J. Hearington, of Lexington; W. F. Heyde, of St. Louis; C. N. Hook, of Braymer; J. L. Jones, of Blackburn; J. S. Matteson, of Parnell; and J. R. Shikles and E. A. Shikles, of Dearborn.

Nine states were represented by a single veterinarian: Arkansas by Dr. Joe H. Bux, of Little Rock; Colorado, by Dr. J. B. Harrison, of Denver; Delaware, by Dr. Louis Levinson, of Meddletown; Georgia, by Dr. J. Lee Hopping, of Atlanta; Idaho, by Dr. S. M. Turner, of Boise; Maine, by Dr. C. L. Ryan, of Dexter; Nevada, by Lyman R. Vawter, of Reno; Vermont, by Dr. Geo. N. Welch, of Northfield; Wyoming, by Dr. S. E. Springer, of Casper.

Minnesota did well to send an even dozen veterinarians to Detroit, most of them being accompanied by their wives. The Gopher veterinarians present were: Drs. Chas. C. Cotton, J. P. Foster, O. B. Morgan, P. E. Nulph, F. O. Guthrie and Donald B. Palmer, of Minneapolis; C. P. Fitch and H. C. H. Kernkamp, of St. Paul; H. A. Greaves, of Glenwood; S. R. Meyers, of Mountain Lake; A. C. Spannaus, of Waconia; and W. S. Wilson, of Buffalo.

Quite a large number of states were represented by their chief live stock sanitary officials, including Drs. Cary, of Alabama; Bux, of Arkansas; Brown, of Indiana; Malcolm, of Iowa; Killham, of Michigan; Cotton, of Minnesota; Rafnel, of Mississippi; Hays, of Nebraska; Faulder, of New York; Moore, of North Carolina; Crewe, of North Dakota; McCandless, of Ohio; Lytle, of Oregon; Munce, of Pennsylvania; Jones, of Tennessee; Williams, of Texas; Givens, of Virginia; Newton, of West Virginia; and Deadman, of Wisconsin.

California was very much in evidence with seven prominent members—Dr. W. L. Curtis, A. V. M. A. Resident Secretary for California; Dr. George H. Hart, member of the Executive Board; William R. Hinshaw, chairman of the Committee on Poultry Diseases; Dr. J. A. Howarth, a contributor to the program; Dr. R. P. Gingerich, of the California State Department of Agriculture; Dr. L. M. Hurt, of the Los Angeles County Department of Live Stock Inspection; and Dr. F. W. Wood, of the Cutter Laboratory.

Official Washington was at the convention in force. The Bureau of Animal Industry was represented by Dr. John R. Mohler, Chief; Dr. Maurice C. Hall, chief of the Zoological Division; Dr. A. E. Wight, chief of the Tuberculosis Eradication Division; Dr. Harry W. Schoening, of the Pathological Division; and Dr. S. O. Fladness. The Bureau of Dairying was represented by Dr. Fred W. Miller, and the Food, Drug and Insecticide Administration by Dr. Henry E. Moskey. The Bureau of

Biological Survey was represented by Dr. J. E. Shillinger and the U. S. Army by Col. R. C. Musser, Maj. R. A. Kelser and Capt. Charles M. Cowherd. Other Army veterinarians in attendance included Lt. Col. Robert J. Foster, of Fort Omaha, Nebr., and Capt. C. E. Cook, of Fort Leavenworth, Kans. Dr. E. E. Ruebush was the only practitioner present from the District of Columbia.

Wisconsin contributed almost thirty to the attendance figures. The profession in the Badger State was represented by Drs. R. H. Arpke, of Sheboygan Falls; W. W. Arzberger, of Watertown; B. A. Beach, C. A. Deadman and James S. Healy, of Madison; A. E. Behnke and Lester W. Thiele, of Milwaukee; C. A. Boesewetter, of Jackson; Edward Boesewetter, of West Bend; C. R. Curtis, of Portage; M. W. Downing, of Waukesha; H. F. Eckert, of Markesan; O. M. Enger, of Holcombe; Geo. E. Evenson, of West Salem; T. H. Ferguson, of Lake Geneva; G. A. Gettleman, of Hartford; C. B. Hillenbrand, of Germantown; W. L. Horn, of Valders; A. H. Junge, of Reedsville; A. J. Kletti, of Slinger; John H. Klug, of Random Lake; A. R. Madson, of Mishicot; O. R. Marzillier, of Jefferson; Walter F. Pfeiffer, of Plymouth; W. L. Richards, of Morrisonville; C. F. Van de Sand, of Kiel; and A. A. Zinkgraf, of Pulaski.

ILLINOIS WELL REPRESENTED

Illinois added almost two score to the attendance figures. From the Chicago district, there were Drs. A. H. Baker, John S. Bengston, E. A. Cahill, J. T. Hernsheim, Wm. E. Holtz, A. A. Liebold, N. S. Mayo, and W. H. Timmons. The other Illinoisians were Drs. J. G. Bloom, of Normal; Fred H. Burt, of Chenoa; Harry Caldwell, of Wheaton; A. E. Campbell, of Rantoul; H. L. Campbell, of Tuscola; John R. Christian, of Woodhull; A. H. Davison and Robert Graham, of Urbana; R. Paul Dingman, Prophetstown; O. T. Douglass, of Galesburg; T. J. Foster, of Monticello; E. E. Gieske, of Wheeling; B. H. Gray, of Windsor; C. B. Hawes, of Poplar Grove; G. H. Hines, of Hume; W. B. Homes, of Springfield; J. S. Koen, of Bloomington; J. V. Lacroix and L. A. Merillat, of Evanston; C. E. Lucas, of Olney; L. J. McClure, of Gurnee; A. M. Mair, of Streator; J. A. Owens, of El Paso; J. E. Sargeant, of Fairbury; H. R. Schwarze, of East St. Louis; W. R. Spesard, of Shelbyville; W. H. Welch, of Lexington; H. S. Wooters, of Champaign; and F. C. Yabsley, Cissna Park.

MORE THAN TWO SCORE FROM THE EMPIRE STATE

New York had more than two score veterinarians at the meeting—Drs. E. B. Ackerman, of Huntington; F. W. Andrews, of Mt. Kisco; J. W. Benner, R. R. Birch, P. A. Fish, J. N. Frost, Walter J. Gibbons, Alexander Gow, Jr., W. A. Hagan, C. E. Hayden, H. J. Milks, W. Taylor Miller, V. A. Moore, D. H. Udall and Alexander Zeissig, of Ithaca; R. G. Bose, of Troy; James S. Carnrite, of Fort Plain; J. Elliott Crawford, of Far Rockaway; J. F. DeVine, of Goshen; Adolph Eichhorn, of Pearl River; E. T. Faulder, Wm. H. Kelly and J. G. Wills, of Albany; F. F. Fehr and F. E. McClelland, of Buffalo; F. D. Fordham, of Watkins Glen; J. V. Hills of Gowanda; H. Kock, of Brooklyn; H. E. Laird, of Whitehall; R. S. MacKellar, Louis D. Mersch and B. T. Woodward, of New York; T. L. McConnell, of Warsaw; H. E. Martin, of Clarence Center; H. K. Miller, of Mamaroneck; H. C. Murray, Glens Falls; F. L. Stein, of Rochester; Charles E. Stone, of Penn Yan; P. V. Weaver, of Greenwich; B. R. Wilbur, of South Dayton; and J. L. Wilder, of Akron.

KEYSTONE STATE TURNS OUT

Pennsylvania was right up in the front ranks with over forty veterinarians in attendance, many of whom were accompanied by their wives and members of their families. Those registered from the Keystone State included Drs. R. S. Amadon, H. E. Bemis, E. T. Booth, Malcolm J. Harkins, William H. Ivens, Louis A. Klein, C. J. Marshall, John Reichel, E. L. Stubbs and H. K. Wright from Philadelphia and vicinity; M. F. Barnes, Robert O. Biltz, William S. Gimper, R. E. Lubbehusen and T. E. Munce from Harrisburg; Wm. Brod, R. C. Dayton and C. W. Frush from Pittsburgh; Eugene M. Coover, J. C. Elviage and P. L. Rouse from Erie; E. P. Althouse, of Sunbury; R. P. Balentine, of Mifflintown; E. E. Bittles, of Waterford; McKeen Boyce, of Vanport; C. W. Boyd, of Sewickley; James E. Burton, of Slippery Rock; C. M. Christy, of Brookville; A. B. Cole, of New Milford; E. L. Cornman, of Marietta; C. D. Evans, of Kane; W. D. Fuller, of Somerset; M. B. Herron and H. S. Pease, of Canonsburg; F. E. Jones, of Greenville; F. J. McNeal, of Wilkes-Barre; H. B. Mitchell, of Lancaster; Walter G. Parker, of Clarks Summit; M. E. Patrick, of Greensburg; Edmond C. Porter, of New Castle; H. B. Prothero, of Johnstown; B. Scott Fritz, of Strasburg; and J. F. Shigley, of State College.

HAWKEYES OUT IN FORCE

Iowa helped to swell the attendance figures with almost two score veterinarians in attendance. The following were present from the Hawkeye State: Drs. Norman W. Ackerman, of Van Horne; F. C. Bornschein, of Merville; W. P. Bossenberger, of Williams; Iva Dunn, of Atkins; C. R. Fry, of Centerville; E. L. Fitch, of Audubon; G. W. Heckethorn, of Cedar Rapids; G. A. Johnson, of Pomeroy; Kress Johnson, of Prairie City; C. E. Juhl, of Osage; Fred H. Kelly, of Goldfield; A. H. Kraus, of Marengo; F. C. Kockendorfer, of Decorah; J. C. McCabe, of Iowa City; W. S. O'Brien, of Ryan; J. O. F. Price, of Algona; A. H. Quin, of Creston; L. E. Ragan, of Mitchellville; J. E. Robertson, of Monona; T. M. Rossing, of Bode; J. J. Ryan, of Palmer; K. W. Schalk, of Iowa Falls; C. J. Scott, of Knoxville; H. J. Shore, of Fort Dodge; J. H. Spence, of Clinton; C. B. Strain, of Dunkerton; L. A. Tischhauser, of Garnavillo; H. B. Treman, of Rockwell City; and F. D. Wertman, of Carlisle. From Des Moines there were Drs. J. A. Barger, P. Malcolm, F. F. Parker and A. H. Quin, Jr.; from Ames, Drs. H. D. Bergman, H. E. Biester, M. A. Emmerson, H. L. Foust, W. F. Guard, C. H. Stange and C. N. McBryde, of the Bureau of Animal Industry.

FIVE CANADIAN PROVINCES REPRESENTED

Five of the nine provinces of Canada had veterinarians in attendance—Alberta, Manitoba, New Brunswick, Ontario and Quebec. Alberta was represented by three members—Drs. L. M. Heath, of Lethbridge; J. Gordon Anderson, of Calgary; and J. C. Phillips, of Edmonton. Manitoba showed up three times on the registry, being represented by Drs. A. J. Andries, of Deloraine; Harry Ross and Donald McArthur, of Brandon. New Brunswick had one member in attendance—Dr. D. J. McLellan, of Moncton. Quebec had a sextet of well-known veterinarians at the meeting made up of Drs. A. A. Etienne, J. A. McLeish and A. E. Moore, of Montreal; E. A. Watson and F. A. Humphreys, of Hull; and M. Gabriel, of La Trappe. Ontario had twenty-three veterinarians registered—Drs. J. H. Boyd, of Essex; William Boyd, of Comber; A. S. Henhoeffler, of Kitchener; J. M. Rice, of London; W. A. Henderson and A. R. Torrie, of Stratford; Geo. A. Clark, F. H. S. Lowrey, H. S. MacDonald, W. Moynihan, Wm. Tennant and Frank Wood, of Toronto; Frank J. Cote, W. J. R. Fowler, C. D. McGilvray and R. A. McIntosh, of Guelph; Orlan Hall, George Hilton, J. B. Hollingsworth, Bruce

D. Kennedy, H. Konst, Chas. A. Mitchell and C. H. Weaver, of Ottawa.

HOOSIERS EXCEED FIFTY MARK

Indiana helped the registration figures considerably. More than fifty Hoosier veterinarians were in attendance including Drs. E. D. Anderson, of Mentone; W. J. Armour and C. C. Winegardner, of Goshen; J. L. Axby, of Lawrenceburg; C. R. Baumgartner, of Spencerville; G. M. Blubaugh, of Lebanon; Frank H. Brown, J. E. Gibson, J. C. Schoenlaub, John A. Schwartz, Harry Seevers, and D. M. Smith, of Indianapolis; H. W. Brown, George W. Gillie and S. D. Wiles, of Fort Wayne; H. E. Bryan, of Angola; John F. Bullard and R. A. Craig, of Lafayette; F. A. Cummings, of LaGrange; H. W. Demsey, of Huntington; N. C. Elbersen, of Anderson; H. O. Elliott, of Orland; L. J. Etnire, of Williamsport; C. F. Finch, of New Albany; L. C. Finley, of Lapel; Charles H. Gates, of Liberty; D. W. Gerber, of Clay City; C. H. Goddard, of Pine Village; H. Meade Hamilton, of Muncie; O. W. Hines, of Butler; C. J. Hufty, of Burlington; Roscoe Hyde, of Hartford City; Thos. F. Hyde, of Brookville; Roe King, of Sheridan; W. C. Kortenber, of New Haven; F. R. Lockridge, of Crawfordsville; H. L. McCormie, of Pendleton; H. J. Magrane, Mishawaka; J. R. Martin, of Romney; G. W. Musselman, of Denire; J. P. Ryan, of Arcola; A. F. Sanders, of Walkerton; Payson Schwin, of Elkhart; Paul F. Scott, of New Market; T. A. Sigler, of Greencastle; G. O. Smith, of Ligonier; C. Harvey Smith, of Crown Point; T. L. Steenerson, of Wilkinson; F. C. Tucker, of Claypool; H. J. Weaver, of Hagerstown; and R. E. Wood, of Rockville.

MORE THAN ONE HUNDRED BUCKEYES

Ohio veterinarians took advantage of the proximity of the meeting. The registrations from the Buckeye State passed the century mark. Those present included Drs. O. C. Alspach, of Marion; H. E. Ash, of Bowling Green; D. W. Ashcraft, A. J. DeFosset, B. H. Edgington, Carl W. Gay, Leonard W. Goss, Jas. D. Grossman, Walter R. Hobbs, F. A. Lambert, C. McCandless, W. H. McKenzie, E. P. Maxwell, Howard W. Miller, R. E. Rabrassier, John Shoemaker, and David S. White, of Columbus; W. A. Axby, of Harrison; J. F. Barnes, Robert Conover, Geo. L. Frese, Warren P. S. Hall, Reuben Hilty, Wm. E. McBain, V. W. Melvin, Leon E. Miller, and C. W. Sass, of Toledo; W. H. Borchers, Bruce Kester, H. M. Manley, and Walter Shaw, of

Dayton; Alvin Broerman, of Reynoldsburg; Cyrus P. Brose, of New Washington; Samuel Burrows, of Shakers Heights; Solon Gillen, H. E. Myers, R. R. Powell and W. H. Redhead, of Cleveland; Frank L. Carr, of Alliance; C. H. Case and H. H. Sparhawk, of Akron; G. H. Chandler, of Upper Sandusky; T. W. Craver and S. R. Craver, of Youngstown; W. H. Derr and W. M. Kinney, of Wooster; F. H. Dettman, of Troy; P. H. Dillahunt, of Springfield; A. H. Dabbelt, of Coldwater; E. Aaron Downs, of Mt. Sterling; J. A. Ellertson, of Madison; Chas. A. Fast, of Van Wert; J. C. Fitzpatrick, of Amelia; L. B. Ford, of Swanton; R. J. Fortney, of Wellington; C. B. Frederick and E. J. Wernet, of Canton; F. H. George, of Plain City; R. A. Greenwood, of Plainesville; R. E. Hammond, of Salem; Richard Harvey, of Montpelier; R. D. Heller, of Oak Harbor; H. A. Hoopes, of La Rue; Harry Hosafros, of Carey; E. V. Hover and L. A. Mosher, of Lima; Mark W. Howett, of Brookville; R. Klaiber, of West Carrollton; H. H. Kettler, of Milford Center; A. J. Kline, of Wauseon; F. A. Drift, of Pemberville; R. R. Laughlin, of South Euclid; J. H. Lenfestey, of Lyons; G. T. Lewis and C. A. Pleuger, of Cincinnati; Geo. W. Lies, of Fort Recovery; W. R. Lukens, of Hillsboro; Leland C. Lynch, of Middletown; J. A. McCoy, of Washington Court House; J. W. Marshall, of Genoa; Wm. Martinsen, of Fremont; Byron P. Merrick, Berlin Heights; L. P. Meyer, of Convoy; Neil H. Myers, of Wilmington; G. M. Pederson, of Hamler; Chas. E. Petteys, of Weston; George S. Place, of St. Marys; J. E. Robertson, of Portsmouth; E. L. Roshon, of Sabina; R. J. Rosselot, of Elyria; L. H. Schmidt, of New Bremen; R. R. Shaw, St. Paris; Clarence D. Smith, Massillon; Geo. E. Springer, of Ashtabula; Earl J. Starbuck, of Port William; W. D. Stockstill, of Sidney; D. M. Swinehart, of Elida; D. M. Warren, of Urbana; M. A. Wiest, of Botkins; C. W. Witty, of Elmore; F. A. Young and E. Ziegenbusch, of Delphos.

OUR NEW PRESIDENT

For the third time in a period of five years, the members of the American Veterinary Medical Association attending an annual convention have been unanimous in their choice of a president to pilot the organization for the ensuing year. At Portland, in 1925, Dr. John W. Adams was the unanimous choice for president. History repeated itself at Minneapolis, last year, in the unanimous selection of Dr. T. E. Munce for this high office.

Again, at Detroit, this year, the members were of a single mind and chose Dr. T. H. Ferguson, of Lake Geneva, Wis., for president. He has the honor of being the fiftieth president of the A. V. M. A. and the fifth veterinarian to be elected president, during the past eight years, from the ranks of the private practitioners.

Born on his father's farm in Linn Township, Walworth County, Wisconsin, about five miles from Lake Geneva, August 18, 1873, Dr. Ferguson received his early education in the public schools of Lake Geneva. The age of 15 found him riding and driving horses for a local trainer. His fondness for horses prompted him to decide on veterinary medicine for his career and he entered the Ontario Veterinary College for that purpose. He was graduated from that institution in 1896 and returned to Lake Geneva, where he established a general practice. One of the best evidences of his success in his chosen field is to be found in the fact that he has remained in the ranks of the practitioners for thirty-three years and now has his son, Dr. Stanley E. Ferguson, associated with him. The younger Ferguson was graduated from the New York State Veterinary College at Cornell University two years ago.

In addition to his professional activities, Dr. Ferguson has found time to take an interest in civic affairs. For two years he served as alderman from the Second Ward of Lake Geneva. For sixteen years he served as treasurer of Union School District No. 1 and, from 1908 to 1924, he was a member of the Board of Education of Lake Geneva. He is vice-president of his Kiwanis Club and an active member of the local Chamber of Commerce. For twenty years, Dr. Ferguson has been a director of the Farmers National Bank and since 1925 has served this institution as president. For the past six years, he has been vice-president of the Taggart Lumber Company.

For nineteen years, Dr. Ferguson has been a member of the Wisconsin State Board of Veterinary Examiners, having been re-appointed by each succeeding governor during this period. During his nineteen years of membership on the Board, he has held the office of president for six years and the office of secretary for thirteen years. He has always taken an active part in the affairs of his State Association and was elected president in 1911.

Dr. Ferguson holds membership in the following organizations, in addition to those mentioned elsewhere in this brief sketch: United States Live Stock Sanitary Association, Linn Farmers'



T. H. FERGUSON, V. S.
President of the American Veterinary Medical Association
1929—1930

Club, Walworth Agricultural Society, Lake Geneva Y. M. C. A., Episcopal Church of Lake Geneva, Union Chapter No. 28 R. A. M., Lake Geneva Lodge No. 44 A. F. and A. M., and Knights of Pythias Lodge No. 96. He is an honorary member of the Theta Chapter of Alpha Psi Fraternity and of the Eastern Iowa Veterinary Association.

Dr. Ferguson was elected to membership in the A. V. M. A. at the Indianapolis meeting, held in 1912. He served as chairman of the Section on General Practice, 1916-1917. In 1922 he was elected second vice-president. He served as a member of the Committee on Intelligence and Education from 1922 until 1927, having been chairman of the Committee during the year 1926-1927. He was chairman of the Committee on Policy during the year just closed.

Surgery is Dr. Ferguson's specialty. He has traveled the length and breadth of the United States and Canada to demonstrate his skill in this field. It is doubtful if the name of any veterinarian has graced the programs of more veterinary association meetings in this connection than has Dr. Ferguson's. No A. V. M. A. clinic would be complete without an operation or a demonstration by Dr. Ferguson. He has been through the mill and, whenever he expresses an opinion or describes the technic of an operation, his listeners know that he is speaking from first-hand experience. He is just as much at home in the lecture-room as in the operating-room. A practitioner, first, last and all the time, Dr. Ferguson stands out in bold relief as a veterinarian who has been an unqualified success in general practice, while, at the same time, a veterinarian who has given more than a fair share of his time and energy to civic and professional activities.

If we may be permitted to judge from the opinions expressed on all sides, both at the meeting and since, the selection of Dr. Ferguson to guide the national organization during the coming year was a most popular one and forecasts another successful year for the A. V. M. A.

TEETER LOSES TOOTER CASE

Dr. Teeter, a veterinary surgeon, reported to the police last night that a cornet case containing about \$100 worth of veterinary surgical instruments had been stolen from his car parked at the rear of the New York Central cigar store.

Elkhart (Ind.) *Truth*

APPLICATIONS FOR MEMBERSHIP

(See July, 1929, JOURNAL)

FIRST LISTING

- ANDERSON, JOHN GORDON 110 6th Ave. E., Calgary, Alta.
B. V. Sc., Ontario Veterinary College, 1924
Vouchers: H. S. MacDonald and W. B. Whyte.
- AYERS, HARRISON WOOD 7 East 9th, Box 848, Oklahoma City, Okla.
V. S., Ontario Veterinary College, 1908
Vouchers: C. R. Walter and C. Pedrick.
- BEVERLY, CHARLES 2505 S. Hamlin Ave., Chicago, Ill.
D. V. M., Cincinnati Veterinary College, 1906
Vouchers: H. Busman and D. D. Tierney.
- BOOTH, GEORGE ROBERT Russell, Ont.
B. V. Sc., Ontario Veterinary College, 1924
Vouchers: C. D. McGilvray and H. S. MacDonald.
- BOTTS, W. E. 926 Mill St., Denton, Texas
D. V. M., Southwestern Veterinary College, 1912
Vouchers: N. F. Williams and H. L. Darby.
- BROCKMAN, ELMER F. Letcher, S. Dak.
D. V. M., Kansas City Veterinary College, 1918
Vouchers: C. C. Lipp and Gilbert S. Weaver.
- BROSE, CYRUS PAUL New Washington, Ohio
D. V. M., Ohio State University, 1927
Vouchers: J. C. Wickham and Leonard W. Goss.
- BROWN, B. A. 515 W. Commonwealth Ave., Fullerton, Calif.
V. S., Ontario Veterinary College, 1896
Vouchers: Fred C. Wright and N. D. Cash.
- BROWN, JAMES R. Ringsted, Iowa
D. V. M., St. Joseph Veterinary College, 1920
Vouchers: C. B. Wilson and F. H. Kelly.
- BROWNING, DILLARD ORSEN 313 Monroe St., Nashville, Tenn.
D. V. M., Alabama Polytechnic Institute, 1912
Vouchers: H. M. O'Rear and J. E. Bender.
- BYLES, AUSTIN B. Coldwater Canyon, Beverly Hills, Calif.
D. V. S., San Francisco Veterinary College, 1904
Vouchers: W. L. Curtis and John F. McKenna.
- CARTER, CLIFTON Box 85, Amarillo, Texas
D. V. S., Kansas City Veterinary College, 1908
Vouchers: Jesse L. Shabram and N. F. Williams.
- CASEY, JOHN M. Box 1185, Van Nuys, Calif.
D. V. M., Cincinnati Veterinary College, 1915
Vouchers: W. L. Curtis and Maynard Rosenberger.
- CHAPIN, CHALMER W. 1208 3rd Ave., Laurel, Miss.
D. V. M., Chicago Veterinary College, 1915
Vouchers: S. J. Horne and Hartwell Robbins.
- CONKLIN, RAYMOND L. R. Macdonald College, Que.
D. V. M., Cornell University, 1917
Vouchers: C. P. Fitch and A. A. Etienne.
- CORE, JOHN L. Shinnston, W. Va.
D. V. M., Grand Rapids Veterinary College, 1915
Vouchers: I. W. Horton and H. M. Newton.
- CRENSHAW, ELYR ROBERT Garland, Texas
D. V. M., Southwestern Veterinary College, 1916
Vouchers: N. F. Williams and Frank D. Porter.

- CRUMP, TOBE WILLIAM Box 464, Albuquerque, N. Mex.
D. V. S., Kansas City Veterinary College, 1911
Vouchers: Harry E. Kemper and F. L. Schneider.
- CURTIS, WILBERT A. Kerrville, Texas.
D. V. S., Kansas City Veterinary College, 1909
Vouchers: Jesse L. Shabram and N. F. Williams.
- DECKER, CHARLES H. 91 W. Starr Ave., Columbus, Ohio
D. V. M., Ohio State University, 1910
Vouchers: A. J. DeFosset and C. McCandless.
- DIBBELL, EDGAR B. 426 W. North Ave., Baltimore, Md.
D. V. M., United States College of Veterinary Surgeons, 1921
Vouchers: J. R. Mohler and Hulbert Young.
- DILL, WALTER IRVING 415 Mission Blvd., San Fernando, Calif.
V. S., Ontario Veterinary College, 1916
Vouchers: W. L. Curtis and L. M. Hurt.
- DINGMAN, R. PAUL Prophetstown, Ill.
V. S., B. V. Sc., Ontario Veterinary College, 1927
Vouchers: K. Ross and W. B. Holmes.
- DODSWORTH, W. E. c/o Ennis Pharmacy, Ennis, Texas
D. V. M., Colorado Agricultural College, 1915
Vouchers: N. F. Williams and W. R. McCuistion.
- EDWARDS, R. M. Gering, Nebr.
M. D. C., Chicago Veterinary College, 1904
Vouchers: C. J. Scott, A. H. Quin, Jr. and Floyd Perrin.
- ETNIRE, LAWRENCE JAY Williamsport, Ind.
V. S., Indiana Veterinary College, 1918
Vouchers: T. A. Sigler and T. E. Munce.
- FORD, LOIS BATES Swanton, Ohio
V. S., Ontario Veterinary College, 1916
Vouchers: H. E. Ash and R. C. Todd.
- GAETZ, HIRAM TYRUM 783 Ellicott St., Buffalo, N. Y.
V. M. D., University of Pennsylvania, 1903
Vouchers: E. P. Althouse and Frank E. McClelland.
- GIBSON, JONATHAN E. 3165 Kenwood Ave., Indianapolis, Ind.
V. S., Indiana Veterinary College, 1904
Vouchers: Frank H. Brown and Payson E. Schwin.
- GORDON, GLENN H. 707 Maple Ave., Plymouth, Mich.
D. V. M., McKillip Veterinary College, 1911
Vouchers: Don R. Coburn and B. J. Killham.
- HAMMOND, RUSSELL EMMETT Star Route, Salem, Ohio
D. V. M., Ohio State University, 1927
Vouchers: J. C. Wickham and Leonard W. Goss.
- HARLAN, WILLIAM H. 900 W. 41st St., Los Angeles, Calif.
D. V. M., Colorado Agricultural College, 1929
Vouchers: C. E. Wicktor and L. M. Hurt.
- HARP, MASON AARON Box 464, Albuquerque, N. Mex.
D. V. M., Kansas City Veterinary College, 1912
Vouchers: Harry E. Kemper and F. L. Schneider.
- HARVEY, JAMES GARDINER 2023 Glendale Ave., Detroit, Mich.
B. V. Sc., Ontario Veterinary College, 1910
Vouchers: C. W. Eddy and H. T. Carpenter.
- HARVEY, RICHARD Montpelier, Ohio
D. V. M., Ohio State University, 1916
Vouchers: F. A. Lambert and E. P. Maxwell.
- HERBOTT, J. W. 951 Arrott St., Philadelphia, Pa.
V. M. D., University of Pennsylvania, 1912
Vouchers: C. O. Neuhaus and E. L. Stubbs.

- HOLZMANN, JESSE A. 912 E. 8th St., Dallas, Texas.
D. V. M., Kansas City Veterinary College, 1912
Vouchers: N. F. Williams and W. R. McCuiston.
- HOMAN, VIRGIL R. Sugar Grove, W. Va.
D. V. M., Indiana Veterinary College, 1918
Vouchers: S. E. Hershey and H. Preston Hoskins.
- HOWARTH, JOHN A. Davis, Calif.
D. V. M., Kansas State Agricultural College, 1923
Vouchers: W. L. Curtis and L. M. Hurt.
- HUSTON, BURR R. 9996 Cascade Ave., Detroit, Mich.
D. V. M., Grand Rapids Veterinary College, 1911
Vouchers: Hugo Cornehl and H. Preston Hoskins.
- JAMES, WILLIAM ARTHUR
Animal Pathology Laboratory, Univ. of Ill., Urbana, Ill.
D. V. M., Ohio State University, 1929
Vouchers: T. J. Foster and Frank Thorp, Jr.
- JELEN, GEORGE D. 967 Whittier St., Columbus, Ohio.
D. V. M., Ohio State University, 1923
Vouchers: Leo E. Davis and T. E. Nichols.
- JENNINGS, C. G. Morris, Minn.
M. D. C., Chicago Veterinary College, 1901
Vouchers: C. P. Fitch and H. Preston Hoskins.
- JOHNSTON, HAROLD E. 309 W. State St., Mason City, Iowa.
D. V. M., Iowa State College, 1913
Vouchers: J. A. Barger and A. H. Quin, Jr.
- JONES, JOHN DANIEL Box 403, Harrisburg, Pa.
D. V. M., Texas A. & M. College, 1926
Vouchers: M. F. Barnes and T. E. Munce.
- KELTY, DENNIS FRANCIS Clarksville, Texas
D. V. M., Southwestern Veterinary College, 1915
Vouchers: N. F. Williams and H. L. Darby.
- KERR, OWEN W. 501 N. Center St., Turlock, Calif.
D. V. M., San Francisco Veterinary College, 1914
Vouchers: Joseph M. Arburua and John McInnes.
- KERSLAKE, EVERETT GEORGE Orono, Ont.
B. V. Sc., Ontario Veterinary College, 1923
Vouchers: C. D. McGilvray and R. A. McIntosh.
- LANTZ, ROY A. Woodbine, Iowa
D. V. M., Kansas City Veterinary College, 1913
Vouchers: James Morris and John B. Bryant.
- LAUGHLIN, ROMY REESE South Euclid, Ohio
V. S., Ontario Veterinary College, 1913
Vouchers: F. A. Lambert and E. P. Maxwell.
- LEGENSHAUSEN, ADOLPH H. 135 S. 26th St., Cedar Rapids, Iowa
M. D. C., Chicago Veterinary College, 1910
Vouchers: J. A. Barger and H. Preston Hoskins.
- LINGO, FRANK J. 920 N. 5th St., Albuquerque, N. Mex.
D. V. M., Cincinnati Veterinary College, 1908
Vouchers: Frank H. Barr and H. E. Kemper.
- McAHREN, D. W. c/o The Purity Serum Co., Sioux City, Iowa
D. V. S., Kansas City Veterinary College, 1911
Vouchers: G. E. Golden and E. S. Dickey.
- McCOLLISTER, GEORGE 308 Wholesale Terminal Bldg., Los Angeles, Calif.
D. V. M., Ohio State University, 1913
Vouchers: W. L. Curtis and L. M. Hurt.
- McILNAY, JOHN NORRIS Ashland, Nebr.
D. V. M., Kansas State Agricultural College, 1928
Vouchers: Floyd Perrin and Frank Breed.

- McKELVEY, STANLEY ROY Beeton, Ont.
B. V. Sc., Ontario Veterinary College, 1924
Vouchers: C. D. McGilvray and R. A. McIntosh.
- MARTIEN, HENRY D. 4054 Powelton Ave., Philadelphia, Pa.
V. M. D., University of Pennsylvania, 1896
Vouchers: C. O. Neuhaus and John D. Beck.
- METCALFE, ALFRED NOEL Box 403, Harrisburg, Pa.
M. R. C. V. S., Royal College of Veterinary Surgeons, 1917
Vouchers: M. F. Barnes and T. E. Munce.
- MICHAEL, SARKIS THADDEUS Division of Vet. Science, Berkeley, Calif.
D. V. M., Iowa State College, 1926
M. S., University of California, 1928
Vouchers: J. Traum and J. R. Beach.
- MILLER, HOWARD W. 94 W. Lane Ave., Columbus, Ohio
D. V. M., Ohio State University, 1908
Vouchers: F. A. Lambert and R. N. Birdwhistle.
- MILLER, WILLIAM COLTER 459 W. 43rd St., New York, N. Y.
D. V. S., New York University, 1904
Vouchers: George Watson Little and J. Elliott Crawford.
- MOORE, ROBERT G. Dunlap, Iowa
D. V. M., Iowa State College, 1913
Vouchers: James Morris and John B. Bryant.
- MORRISON, ROBERT H. 2500 16th St., San Francisco, Calif.
D. V. M., Washington State College, 1929
Vouchers: Oscar J. Kron and Joseph M. Arburua.
- MURPHY, FRANK P. 635 W. Olney Ave., Philadelphia, Pa.
V. M. D., University of Pennsylvania, 1913
Vouchers: Edward E. Behrens and C. O. Neuhaus.
- MYLNE, ROBERT CLYDE 115 S. Baker St., McMinnville, Ore.
V. S., Montreal Veterinary College, 1889
D. V. S., McGill University, 1890
Vouchers: William H. Lytle and Ivan C. Robinson.
- NOBLE, GEORGE W. 11808 Long Beach Blvd., Lynwood, Calif.
M. D. C., Chicago Veterinary College, 1904
Vouchers: L. M. Hurt and W. L. Curtis.
- ORP, JAMES L. 9 Thomas St., Springfield, Mass.
D. V. M., Alabama Polytechnic Institute, 1923
Vouchers: Clarke Hedley and Richard N. Shaw.
- POINDEXTER, C. L. Moorefield, W. Va.
D. V. M., Indiana Veterinary College, 1912
Vouchers: S. E. Hershey and Ernest Layne.
- QUINN, THOMAS J. No. 3 Bailey Road, Landsowne, Pa.
V. M. D., University of Pennsylvania, 1910
Vouchers: C. O. Neuhaus and E. L. Stubbs.
- RAMBO, FRED ELLIS Box 86, Quitman, Miss.
D. V. M., Indiana Veterinary College, 1911
Vouchers: Hartwell Robbins and R. V. Rafnel.
- REID, JOSEPH J. 701 Wheat Bldg., Fort Worth, Texas
D. V. M., Texas A. & M. College, 1921
Vouchers: N. F. Williams and W. R. McCuiston.
- ROSHON, ELMER L. Sabina, Ohio
D. V. M., Ohio State University, 1919
Vouchers: Neil H. Myers and Leland C. Lynch.
- ROSSELOT, ROY J. 345 2nd St., Elyria, Ohio
D. V. M., Ohio State University, 1925
Vouchers: F. A. Lambert and R. N. Birdwhistle.
- RUTH, THOMAS H. Pierre, S. Dak.
M. D. C., Chicago Veterinary College, 1906
Vouchers: C. C. Lipp and Gilbert S. Weaver.

- SANDERS, ALFRED F. Walkerton, Ind.
V. M. D., Indiana Veterinary College, 1911
Vouchers: T. A. Sigler and R. C. Julien.
- SCHMIDT, JOHN PETERSON 6897 Perrysville Ave., Ben Avon, Pa.
V. S., Ohio State University, 1906
Vouchers: T. E. Munce and Wm. Brod.
- SCHWARTZ, J. A. 4036 Eastern Ave., Indianapolis, Ind.
D. V. M., Indiana Veterinary College, 1910
Vouchers: T. A. Sigler and R. C. Julien.
- SELEMENT, ROY E. Yukon, Okla.
D. V. M., Kansas City Veterinary College, 1912
Vouchers: C. R. Walter and C. Pedrick.
- SENIOR, GEORGE B. Winterset, Iowa
B. V. Sc., Ontario Veterinary College, 1921
Vouchers: J. A. Barger and A. H. Quin, Jr.
- SHARPE, T. J. Coggon, Iowa
D. V. M., St. Joseph Veterinary College, 1923
Vouchers: John B. Bryant and John W. Griffith.
- SIMMONS, CLAND B. 2551 Forest Place, East St. Louis, Ill.
D. V. S., United States College of Veterinary Surgeons, 1912
Vouchers: C. C. Hastings and W. H. Welch.
- SIMONS, JOHN P. 219 Federal Bldg., Des Moines, Iowa
D. V. M., Cincinnati Veterinary College, 1910
Vouchers: J. A. Barger and A. H. Quin, Jr.
- SMITH, DAVID M. 543 N. Oakland Ave., Indianapolis, Ind.
D. V. M., Indiana Veterinary College, 1916
Vouchers: T. A. Sigler and N. C. Elbersen.
- SMITH, GEORGE AUGUSTUS R. F. D. No. 1, Cumberland, Md.
D. V. S., American Veterinary College, 1888
Vouchers: E. M. Pickens and R. C. Reed.
- SMITH, LEONARD S. 1213 Custer St., Laramie, Wyo.
D. V. M., Colorado Agricultural College, 1918
Vouchers: John T. Dallas and Aubrey M. Lee.
- SMOTHERMAN, WILLIAM MITCHELL Huntsville, Texas
D. V. M., Southwestern Veterinary College, 1914
Vouchers: N. F. Williams and W. R. McCuiston.
- STEELE, CARROLL CHESTER Treynor, Iowa
D. V. M., Chicago Veterinary College, 1914
Vouchers: C. J. Scott and E. R. Steel.
- STEERS, K. O. 1210 Steiner St., San Francisco, Calif.
V. S., Ontario Veterinary College, 1893
Vouchers: Oscar J. Kron and O. A. Longley.
- STRONG, G. C. 115 Irving St., Waterloo, Iowa
D. V. M., Iowa State College, 1909
Vouchers: J. A. Barger and A. H. Quin, Jr.
- SULLIVAN, SAMUEL WAYNE Demopolis, Ala.
D. V. M., Alabama Polytechnic Institute, 1913
Vouchers: D. J. Meador and C. A. Cary.
- SWEIGARD, MELVIN LEROY 1620 N. 3rd St., Harrisburg, Pa.
V. M. D., University of Pennsylvania, 1928
Vouchers: S. E. Bruner and T. E. Munce.
- WALLACE, WILLIAM ARTHUR Box 225, Ashland, Ky.
D. V. M., Cincinnati Veterinary College, 1920
Vouchers: Harry Gieskemeyer and M. C. Hall.
- WILDER, JOSEPH L. Akron, N. Y.
D. V. M., Cornell University, 1901
Vouchers: F. W. Andrews and P. A. Fish.

- WILMOT, CLEMENT E. 310 State House, Cheyenne, Wyo.
D. V. M., Colorado Agricultural College, 1920
Vouchers: John T. Dallas and S. E. Springer.
- WINEINGER, J. M. 1302 W. 1st, Boone, Iowa
D. V. M., Iowa State College, 1917
Vouchers: J. A. Barger and A. H. Quin, Jr.
- WOOFER, H. BLAINE Cox's Mills, W. Va.
D. V. M., Cincinnati Veterinary College, 1917
Vouchers: I. W. Horton and H. M. Newton.
- WOOD, ARTHUR LEWIS 519 N. Franklin St., Hampton, Iowa
D. V. M., Iowa State College, 1902
Vouchers: W. F. Guard and C. J. Scott.

Applications Pending

SECOND LISTING

- Ackerman, Norman W., Van Horne, Iowa.
Allen, George Henry, 1125 N. Madison St., Dallas, Texas.
Andries, Albert Joseph, Box 145, Deloraine, Man.
Applewhite, Thomas Henry, 339 W. 26th St., Jacksonville, Fla.
Barnes, Allen S., 513 Logan St., Frankfort, Ky.
Becker, L. H., Bellevue, Iowa.
Benson, David Albin, 5924 S. Richmond St., Chicago, Ill.
Briggs, Lyle Howard, 758 Rademacher St., Detroit, Mich.
Brown, Laurister Nash, 441 Turner St., Auburn, Maine.
Carver, H. C., Higginsville, Mo.
Casey, John William, 3690 Oak St., Jacksonville, Fla.
Chase, Carl Eddrie, 286 Pleasant St., Concord, N. H.
Cherry, John L., Tarkio, Mo.
Clarke, Roy Emory, R. R. No. 1, Box 52 D. Montesano, Wash.
Cooke, Herbert T. B., 1304 N. 28th St., Philadelphia, Pa.
Cotton, Daniel Luzern, Beresford, S. Dak.
Crider, R. A., Elgin, Iowa.
Crooks, Harry F., Chilhowee, Mo.
Crouch, Sam, 816 S. San Pedro St., Los Angeles, Calif.
Davis, Art Marshall, Akron, Iowa.
Dromgoole, E. B., 1314 Texas Ave., Mart, Texas.
Edelin, Allen A., Laurel, Md.
Edmiston, Geo. A. H., Easton, Md.
Farnsworth, George K., 2031 Cambridge St., Los Angeles, Calif.
Fauks, Carl H., 1919 W. Ash St., Oklahoma City, Okla.
Flaxman, Charles E., Darien, Conn.
Gibbs, Clarence J., 326 E. St. N. E., Washington, D. C.
Gilloon, T. J., Dyersville, Iowa.
Gow, Alexander, Jr., New York State Veterinary College, Ithaca, N. Y.
Hatcher, Nelson N., Clinton, La.
Henderson, Finis E., 643 Court St., Elko, Nev.
Hollister, A. V., Clinton, Wis.
Horn, Homer H., 2309 S. 50th Ave., Cicero, Ill.
Houldsworth, Joseph Dean, 180 Green Lane, Manayunk, Pa.
Ingram, William L., Opelika, Ala.
Jones, Everett B., Box 702, Vernon, Texas.
Kellogg, Louis Warren, Anamosa, Iowa.
Knotts, Frank Rankins, 1101 Duncan St., Stillwater, Okla.
Ladson, Herman H., R. F. D. 5, Rockville, Md.
Lawhon, Glen J., Hartsville, S. C.
Lee, William J., 39th St. and Woodland Ave., Philadelphia, Pa.
Lentz, Frank E., 39th St. and Woodland Ave., Philadelphia, Pa.
Lewis, Henry V., State College Station, Brookings, S. Dak.
Lewis, Lawrence, Clarksville, Texas.
Lewis, Lawrence John, 330 Federal Bldg., Madison, Wis.
Love, James Robert, Elliott City, Md.

Lowell, J. A., 117 S. Bell, Shawnee, Okla.
 McClung, Hugh Edward, 831 Milford, Glendale, Calif.
 McDermont, G. F., 1932 S. Hobart Blvd., Los Angeles, Calif.
 Miller, Chauncey Brady, 1001 Ocean Ave., San Francisco, Calif.
 Moe, Paul S., 2329 Grant Ave., Fresno, Calif.
 Niemann, Karl Willim, 31 W. 9th, Reno, Nev.
 Ormiston, Adam W., 6353 McCallum St., Germantown, Philadelphia, Pa.
 Parrott, Walter L., U. S. Bureau of Agricultural Economics, Dover, Del.
 Peck, Edwin L., New Augusta, Miss.
 Phillips, Francis M., 506 5th St., Dell Rapids, S. Dak.
 Pilgrim, Ernest C., 214 S. Porter, Okmulgee, Okla.
 Rogers, Robert Lee, Jr., Health Department, City Hall, San Angelo, Texas.
 Rush, William Marvin, Box 202, Wink, Texas.
 Scheidy, Samuel Franklin, 39th St. and Woodland Ave., Philadelphia, Pa.
 Schondau, Theo., Claremont Hotel, Baltimore, Md.
 Shaw, Ralph Robert, St. Paris, Ohio.
 Stewart, Ray Elliot, Riceville, Iowa.
 Strain, C. B., Dunkerton, Iowa.
 Strode, Clifton W., Ash Grove, Mo.
 Treman, Perry E., Odebolt, Iowa.
 Vollstedt, William C., Dixon, Iowa.
 Ward, John W., 1638 Westheimer St., Houston, Texas.
 Watson, Charles Edwin, Lafayette Hill P. O., Pa.
 Webster, Charles, Great Bend, Kansas.
 Welsh, Mark Frederick, College Park, Md.
 Westerberg, Herman P., Simsbury, Conn.
 Wheeler, N. M., Winnsboro, Texas.
 Wilson, John T., Pawnee, Okla.
 Young, Harvey Wilson, 3634 Main St., Kansas City, Mo.

The amount which should accompany an application this month is \$6.67 which covers membership fee and dues to January 1, 1930, including subscription to the JOURNAL.

COMING VETERINARY MEETINGS

- Chicago Veterinary Society. Great Northern Hotel, Chicago, Ill. September 10, 1929. Dr. J. B. Jaffray, Secretary, 2956 Washington Blvd., Chicago, Ill.
- Kansas City Association of Veterinarians. New Baltimore Hotel, Kansas City, Mo. September 10, 1929. Dr. J. D. Ray, Secretary, 400 New Centre Bldg., Kansas City, Mo.
- Southeastern Michigan Veterinary Medical Association. Detroit, Mich. September 11, 1929. Dr. H. Preston Hoskins, Secretary, 716 Book Bldg., Detroit, Mich.
- Southern California Veterinary Medical Association. Chamber of Commerce Bldg., Los Angeles, Calif. September 18, 1929. Dr. W. L. Curtis, Secretary, 1264 W. 2nd St., Los Angeles, Calif.
- Eastern Iowa Veterinary Association. Hotel Montrose, Cedar Rapids, Iowa. October 9-10, 1929. Dr. Paul Neuzil, Secretary, Blainstown, Iowa.

ADDRESS OF THE PRESIDENT*

By T. E. MUNCE, Harrisburg, Pa.

I am deeply appreciative and truly grateful to the veterinary profession of America for having conferred upon me the highest honor that this profession can bestow upon one of its members, by making me "The President" of the greatest veterinary organization in the world.

The Constitution of the American Veterinary Medical Association makes it a duty of the president to deliver an address at the annual meeting and I shall now endeavor to fulfill this requirement.

When I accepted the presidency of this association at the close of the 1928 meeting, I pledged myself to do certain definite things by stating:

It shall be my purpose during the year to promote the work of our great association, to the end that it may function most efficiently and effectively and thus be most helpful to the members of our honorable profession in the several branches of veterinary medicine, and that the influence for mutual good may be widespread in allied fields of endeavor.

I shall give my best efforts to assist in the development of a program for the constructive building of veterinary medicine.

In my efforts to carry out that pledge, I have been given the loyal support of the officers and members. The Executive Board has given me a free hand in matters of policy and administration. The Secretary-Editor has, throughout the year, been most helpful and loyal to me. To him and his staff of able assistants do I owe a debt of profound gratitude. All of the officers, as well as the members, have my sincere thanks and everlasting appreciation for their whole-hearted support and the many courtesies extended me during my term of office.

A constructive working program was outlined at the beginning of the current A. V. M. A. year. Nothing of a revolutionary or spectacular character was attempted or considered. There was no occasion for it. My predecessors were sound thinkers and constructive workers and had the best interests of our profession and the A. V. M. A. at heart. The high standard they set was as a beacon for me in charting my course and, thanks to them, it has had an inspiring influence upon me to add at least a small contribution to the A. V. M. A. structure.

*Presented at the sixty-sixth annual meeting of the American Veterinary Medical Association, Detroit, Mich., August 13-16, 1929.

Lowell, J. A., 117 S. Bell, Shawnee, Okla.
 McClung, Hugh Edward, 831 Milford, Glendale, Calif.
 McDermont, G. F., 1932 S. Hobart Blvd., Los Angeles, Calif.
 Miller, Chauncey Brady, 1001 Ocean Ave., San Francisco, Calif.
 Moe, Paul S., 2329 Grant Ave., Fresno, Calif.
 Niemann, Karl Willim, 31 W. 9th, Reno, Nev.
 Ormiston, Adam W., 6353 McCallum St., Germantown, Philadelphia, Pa.
 Parrott, Walter L., U. S. Bureau of Agricultural Economics, Dover, Del.
 Peck, Edwin L., New Augusta, Miss.
 Phillips, Francis M., 506 5th St., Dell Rapids, S. Dak.
 Pilgrim, Ernest C., 214 S. Porter, Okmulgee, Okla.
 Rogers, Robert Lee, Jr., Health Department, City Hall, San Angelo, Texas.
 Rush, William Marvin, Box 202, Wink, Texas.
 Scheidy, Samuel Franklin, 39th St. and Woodland Ave., Philadelphia, Pa.
 Schondau, Theo., Claremont Hotel, Baltimore, Md.
 Shaw, Ralph Robert, St. Paris, Ohio.
 Stewart, Ray Elliot, Riceville, Iowa.
 Strain, C. B., Dunkerton, Iowa.
 Strode, Clifton W., Ash Grove, Mo.
 Treman, Perry E., Odebolt, Iowa.
 Vollstedt, William C., Dixon, Iowa.
 Ward, John W., 1638 Westheimer St., Houston, Texas.
 Watson, Charles Edwin, Lafayette Hill P. O., Pa.
 Webster, Charles, Great Bend, Kansas.
 Welsh, Mark Frederick, College Park, Md.
 Westerberg, Herman P., Simsbury, Conn.
 Wheeler, N. M., Winnsboro, Texas.
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Southeastern Michigan Veterinary Medical Association. Detroit, Mich. September 11, 1929. Dr. H. Preston Hoskins, Secretary, 716 Book Bldg., Detroit, Mich.

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EDUCATION

As the veterinary profession grows older and the field of veterinary medicine becomes more diversified, the problems arising from the veterinary educational system become more complex and difficult of solution, and also make it essential that our schools of veterinary medicine be kept up to date in every respect. The schools have made as much progress as possible with the resources at their command, but they are under-manned more or less lacking in equipment and some are not properly housed. They should have an adequate number of properly trained teachers, modernly equipped buildings and sufficient clinical and research material of suitable character. This requires money in adequate amount to finance them properly. Additional schools are not needed but there is urgent need for more money to finance the schools already established.

Recognizing the possibility of a shortage of veterinarians and the need for trained men to cope satisfactorily with the present and future animal-disease problems, the National Holstein Friesian Association, at its 1929 annual meeting held at Philadelphia, expressed concern as to the future of veterinary medicine in this country and pledged its assistance in bringing about the necessary relief. Moreover, this year's A. V. M. A. working program embraced the drafting of a comprehensive program of veterinary education. Your Committee on Education is giving attention to the drafting of such a program. It will require more than a year to complete the work and the report for this meeting will of necessity be preliminary. I can think of no subject of greater importance to the veterinary profession than that of education, including the financial predicament of our veterinary schools, and I ask you to become interested in and support a suitable program covering this subject.

EXAMINING BOARDS

Most states have laws regulating the practice of veterinary medicine. The majority of the veterinary practice laws were enacted at a time when the standard of veterinary education maintained by the A. V. M. A. was lower than at the present time.

In view of the existing A. V. M. A. supervision over veterinary schools, I suggest the following points as being worthy of careful consideration:

1. Discontinue the requirement that students who have been graduated from schools approved by the A. V. M. A. take an additional examination given by examining boards.

2. Let examining boards license those who duly present themselves armed with diplomas from schools approved by the A. V. M. A.

3. This association become more actively interested in the licensing of veterinarians through reciprocity between states.

4. Study the proposal to establish a National Veterinary Licensure Board.

AFFILIATION WITH STATE AND PROVINCIAL ASSOCIATIONS

This year's working program embraced the bringing about of an affiliation between the A. V. M. A. and the various state and provincial associations. Those who have given this proposition careful thought over a period of years recognize the advantages that would accrue and are thus in favor of an affiliation that will be advantageous to both.

A special committee, authorized by the A. V. M. A. to study this proposition, in the report made at the 1922 annual meeting, recommended that there should be an intimate relationship established between the A. V. M. A. and the state and provincial associations.

During the past year, the following state associations have authorized the appointment of special committees to study the matter of affiliation with the A. V. M. A.: Massachusetts, Illinois, Ohio, Virginia, Iowa, New Jersey, North Carolina, Missouri, Minnesota, North Dakota, Wisconsin, Maryland and Pennsylvania. This was a step forward and brings us nearer to the consummation of a definite affiliation between the A. V. M. A. and the state and provincial associations. I recommend that a special committee of the A. V. M. A. on affiliation be authorized at this meeting, said committee to confer with similar committees representing the various state and provincial associations and through studies make definite recommendations to the A. V. M. A.

PUBLICITY

The present is an age for publicity. Practically every organization of importance is striving to acquaint the public concerning its work.

Religious, professional, business and political organizations recognize the relationship which publicity has to the success of

their work. They have set about to bring to the attention of the public, in a convincing manner, the character and importance of their individual activities. In the matter of publicity, veterinary medicine is an exception and your Executive Board has a sub-committee on publicity. Moreover, several of the state associations are maintaining similar committees which are doing effective work locally in behalf of veterinary medicine. In this they are to be commended.

Insofar as possible, the publicity programs of the various state and provincial associations and that of the A. V. M. A. should be correlated. Furthermore, all statements given out on veterinary subjects, whether by an association or an individual, should be based on well-established facts and be dignified and professional.

The right kind of publicity covering veterinary subjects is desirable. The A. V. M. A., state and provincial associations, as well as individual veterinarians, could to advantage give more attention to this subject. Care should be taken, however, not to get over into the advertising field. Commercial advertising by veterinarians is unprofessional. The Executive Board should be commended for its action in appointing a sub-committee to study the publicity question. No doubt the board will have early and definite recommendations to make concerning a program of publicity for the A. V. M. A.

PUBLIC HEALTH WORK

Every state has a Department or Board of Health, as has also practically every municipality. Some of the diseases of humans with which boards of health have to deal are also prevalent in animals and are communicable to human beings. Until the class of diseases to which I have referred is eliminated from animals or certainly well under control, it will be impossible for departments of health to control successfully said diseases among people. Furthermore, the enforcement of milk and meat inspection ordinances deals with the health and physical condition of food producing animals and food products derived therefrom which strictly are veterinary problems. State and local boards of health have to consider and decide questions of importance involving the diseases of animals and it is, essential therefore, that the advice of qualified veterinarians be sought. The best way to obtain this veterinary assistance is for each public health board, state or local, to have a qualified veterinarian as a member.

This is a subject to which the A. V. M. A. as well as the state and provincial associations should give more attention. First, in order that public officials may see the advantage of having qualified veterinarians as members of boards of health and, second, that more interest among veterinarians in public health work may be developed.

DISEASE PREVENTION

Veterinarians in general should not overlook the importance of disease prevention because prevention is the key to successful methods for the control of each and every disease.

At the 1921 meeting of this association at Denver, I was privileged to present a paper on "The Importance of Preventive Measures in the Repression of Animal Diseases." In this paper, it was recommended that a special committee on disease prevention be authorized by the association, which was done. The report presented by this committee last year was especially constructive and helpful. Not only are the medical professions taking more interest than ever before in the prevention of disease, but the peoples of the world, as well, are becoming aroused to the importance of ascertaining and removing the causes of death and needless destruction and economic waste.

The veterinary profession should assume the leadership in matters of preventive medicine. Veterinary researches that will continue to discover defenses against disease should be given more sympathetic and substantial support. Moreover, this association should give every encouragement possible to its committee on disease prevention to the end that the subject may be kept alive and before the profession; also that a suitable and constructive disease-prevention program may be developed from year to year without interruption.

PRIVATE PRACTITIONERS

I desire to emphasize the importance of the private practitioners to veterinary medicine and the A. V. M. A. Approximately 70 per cent of the members of the A. V. M. A. are private practitioners. The A. V. M. A. should, therefore, be more concerned than any other organization in the welfare of the private practitioners. It is my belief that the growth and influence of this association will depend largely upon the attitude of the private practitioners toward it.

While the A. V. M. A. can do things for the benefit of the private practitioners, it cannot do all. They must help them-

selves. The welfare and success of a veterinarian depends ultimately upon his own individual ability and efforts. I have tried to emphasize, before the meetings which I have attended, that veterinarians should be certain that they understand fully the character of veterinary service needed, then equip themselves to supply that needed service better than any other person. Veterinarians should familiarize themselves with live stock outside of disease problems to the end that owners will feel that veterinarians are an integral and indispensable part of their business and that they cannot get along without the services of modern veterinarians.

In his presidential address before the American Medical Association, back in 1874, Joseph M. Toner, M. D., made the following statement:

The successful medical man must be fully up with the times, conversant with the latest means of diagnosis, the theory of diseases and their cures. The physician who does not constantly keep adding to his knowledge, must soon fall behind the more enterprising and better informed of his contemporaries. The physician who does not know that the community in which he lives is keeping a constant watch upon him and contrasting his knowledge, skill, and success in his profession with those of the best medical men within the range of their reading or acquaintance, shuts his eyes to an important fact of great interest to himself.

What President Toner said 55 years ago applies equally well today, not only to the physician but also to the veterinarian, and I commend it to you as food for earnest thought.

LOCALITIES WITHOUT VETERINARIANS

While veterinarians themselves should be efficient and assume their professional responsibilities, those who have need for veterinary service are not without responsibilities toward the veterinary profession.

Owners have complained because they do not have local veterinary service. They should recognize, however, that a competent veterinarian cannot afford to remain in a community where there is little practice. If, through lack of employment and encouragement, owners should force a veterinarian to locate elsewhere, they must assume full responsibility for losses that are sustained among live stock because of the absence of local veterinary services.

SMALL-ANIMAL HOSPITALS AND SPECIALISTS

My immediate predecessor, in his presidential address, called attention to the tendency among veterinarians of mixing commercialism with the practice of veterinary medicine. He spoke

especially of the combination pet shops and small-animal hospitals owned and operated by graduate veterinarians. I not only endorse what he said in that connection, but call attention to the misrepresentation practiced by many of the so-called small-animal specialists in advertising their hospitals as being modernly equipped—when they are not—to house sick and injured animals. The *North American Veterinarian*, in the June, 1929, issue, very courageously called attention editorially to this deplorable situation. There is still another type of so-called veterinary specialists who are a detriment to veterinary medicine; namely, those who will deceive innocent clients by performing fake operations such as appendicitis on dogs or will use, over and over again on different dogs, the same x-ray picture. It is high time for this association to place on members of the veterinary profession, to which I have just referred, its stamp of disapproval.

A veterinarian in offering his services to the public should have but one thing to sell—his honest services. The public interest is paramount and should never be subordinated to that of the individual. This appears to have been overlooked by the veterinarians to which I have referred and whose views extend no further than the opportunity of the moment.

THE STABILIZATION OF STATE REGULATORY ORGANIZATIONS

The administrative ability and specialized training of a regulatory official must be recognized as an important factor in insuring permanency of live stock regulatory organization. Men who are not influenced by political expediency, but who endeavor to deal with problems that arise on the basis of scientific principles and sound administrative practice, are needed in these positions. The executive officer of every live stock sanitary organization should be a veterinarian. I can think of no good reason why one who is not a qualified veterinarian, trained in animal disease control, should be permitted to occupy this important position. An important problem at present in the promotion of animal disease control in this country is to make more secure the tenure of position of well-trained state regulatory officers. Bureaus of animal industry and live stock sanitary boards are scientific institutions when properly evaluated and their work must be developed and maintained on an efficient basis. The remuneration of an experienced and well-trained veterinary regulatory officer is seldom commensurate with the service which he renders. It is imperative, therefore, that his

position be made more attractive and that he be given opportunity to administer a regulatory organization on a scientific and business basis rather than from a political point of view. The removal of a veterinary regulatory official *for political reasons alone* should be an impossibility. In states in which the profession has played an active part in the selection of regulatory officials, such stability already exists, but in many of them it does not.

A movement should be made in the development of a more uniform plan for the stabilization of the state live stock regulatory departments. There is definite need for legislation in many states which will assure greater permanency in the positions of state regulatory officials. The organized veterinary profession is especially well adapted for undertaking this important task. It can be done through the activities of the constituent state veterinary medical associations with the administration leadership of the A. V. M. A. In achieving this result, it will cause a larger number of promising graduates of veterinary medicine to choose live stock regulatory work as a career and it will also definitely contribute toward the solution of many of the problems which at present confront the veterinary profession.

POULTRY DISEASES

The poultry industry is seeking assistance to cope with its disease problems. This service should be rendered by the veterinarian because he is best qualified to give advice concerning diseases.

At the 1928 meeting of the A. V. M. A. a section on poultry diseases was created and a program has been arranged for this meeting. The creating of this new section will promote greater interest among veterinarians in the disease problems of the poultryman and result in more efficient veterinary service to the poultry industry.

The helpfulness of this new section to the members will depend upon the use they make of it. I am hopeful, therefore, that all veterinarians in attendance who are or should be interested in the diseases of poultry will participate in its sessions.

In addition, a special committee has been appointed whose duty shall be the study of the diseases of poultry and to familiarize veterinarians with the most efficient methods of procedure.

I consider the creating of this new section and special committee on the diseases of poultry as being among the most important things done by the A. V. M. A. in recent years.

FREE SERVICE

Through the development of agricultural extension and transmissible disease control work, owners of live stock are receiving much free service which is being paid for out of public funds. Regulatory workers and county agents in many sections have unquestionably been performing veterinary work that should be done by the local practitioners and paid for by the owners.

If an owner has a sick animal or desires advice concerning the health of his herd or flock, he should consult the local private practitioner. If the disease should be one for the regulatory authorities to deal with, the private practitioner should so advise the owner; also make a prompt and complete report to the state or provincial authorities.

The public should rely more upon the local practitioners for veterinary service. Such service should be paid from private rather than public funds.

More of the public funds which are being spent for free veterinary service could to advantage be diverted to veterinary research, and training veterinarians in the use of better methods.

I believe it a duty of this association to exert itself, through the proper channels, to bring about the curtailment of free veterinary service.

MEMBERSHIP

We are informed that there are approximately 10,000 veterinarians residing in A. V. M. A. territory who are eligible for membership in it. Of this number, about 4250 or 42 per cent, are members.

During the current year, as our Secretary will report, close to 650 applications for membership have been received. I am grateful to all those who participated in the campaign for new members. The result was gratifying and should encourage more work toward securing new members during the coming year. Approximately 5800 eligible veterinarians (58 per cent) are not members. What can and should be done to bring the eligible non-members into the Association? The A. V. M. A. is doing much for the profession and the non-members benefit as well as the members, and it is unbelievable that so large a number, would be willing, year after year, to be the recipient of A. V. M. A. benefits and not want to contribute their share toward association expenses. But that is just what every non-member of the A. V. M. A. is doing and their indifferent and ungrateful

attitude toward the association is to be regretted. This situation reminds me of a train I saw passing over the great Rockville bridge of the Pennsylvania Railroad across the Susquehanna River. This train was being drawn by a massive locomotive and in addition to cars it was pulling several dead locomotives. These dead locomotives made me think of veterinarians who do not belong to and support the A. V. M. A. yet are willing to be pulled along and let their share of association expense be carried by their willing and interested colleagues.

The majority of non-members when approached to join the Association give as their excuse, "The A. V. M. A. is doing nothing for me." If the veterinarians who belong to and support the Association took a similar attitude, what would be the present status of veterinary medicine and where would our profession stand today? The answer will be found by studying the accomplishments of the A. V. M. A., and in becoming familiar with the work of this association. There may be an excuse for not joining but the one usually given is the worst that could be offered.

The effort that has been made to get eligible non-members to see the opportunities offered and their obligations toward the A. V. M. A. as inducements to become members should be continued and supported by every member. Without members, the A. V. M. A. cannot exist. It obtains its revenue only from one source, namely, the veterinary profession.

This brings us to the question of finances and I have requested the Secretary-Editor to discuss the subject, which he has consented to do. As a prelude, however, I have no hesitancy in saying that the time has arrived for the Association to consider increasing the annual membership dues. The present revenue is inadequate for the Association to function as it should and precludes the necessary expansion of its activities.

OUR SECRETARY-EDITOR

Our efficient and diligent Secretary-Editor is functioning par excellence. For him I have a lively affection and a great admiration. His work has always been of the highest calibre. Each year his services as secretary-editor excel those of the preceding year. The Association is fortunate in having Dr. Hoskins as its secretary-editor. He is deserving of the united support and encouragement of the profession.

THE JOURNAL

The official JOURNAL is being published for the benefit of the membership. The Editor is confronted with the problem of how to procure more material that will be helpful to the general practitioner; also to find space in the JOURNAL for publishing same. It would seem to be time, first, either to condense materially the proceedings of the meetings or to publish them elsewhere, either of which would release space in the JOURNAL that could be used to advantage for publishing additional articles for the benefit of the general practitioners; second, for those connected with our veterinary schools to contribute, more liberally than they have done in the past, articles that will be helpful to the general practitioners; third, for more of our general practitioners to contribute to the JOURNAL, case reports that will interest and help others in the same field.

EXPANSION AND READJUSTMENT INEVITABLE

The work thus far done by the Committees on Education, Veterinary Biologics, and Proprietary Pharmaceuticals indicates the desirability of extending the scope of their activities. For illustration: A veterinary fact-finding survey seems to be indicated to ascertain concerning the demands, the supply and the distribution of veterinarians.

Investigations as to the value of veterinary biologics and pharmaceuticals along lines similar to those of the American Medical Association have been suggested and are undoubtedly indicated for the A. V. M. A. This would call for the formation within the A. V. M. A. of a properly organized Council on Biologics and Therapeutics and require additional financing.

The staff of the Secretary-Editor should be enlarged. His duties have increased to the point where he needs additional suitable assistants. Because of his intense interest in the work and loyalty to the Association, our Secretary-Editor has been influenced to remain constantly at his post without taking time for recreation and rest for a period of six years.

The office of the Association should be so organized as to permit the Secretary-Editor or his qualified representative to be on the road attending meetings and establishing other helpful contacts a reasonable portion of the time. Otherwise, its views will be less broad and constructive. Furthermore, additional help is indicated to keep the administrative and editorial machinery going in case of disability of the Secretary-Editor. I

question if there is another organization with equal activities and membership which is so dependent upon a single person as the A. V. M. A.

I consider it imperative that the conditions herein pointed out in the office of the Secretary-Editor be corrected at the earliest possible date.

ELIMINATE WASTE OF TIME

In the solution of the problems mentioned, time is an important factor.

Next to life itself, time is the most valuable thing we possess. The time of the members who attend association meetings and read the official JOURNAL is both limited and valuable. Because of this and the fact that their interests in veterinary medicine are diversified, the time is here to eliminate from our programs and pages of the official JOURNAL, unimportant material and to cut down the length of many of the papers presented. Furthermore, the so-called business sessions occupy too much of the members' time. Instead of so many business sessions we should invest in a properly constituted smaller body authority to transact the routine business of the Association. This smaller body could to advantage be created in connection with the affiliation with the state and provincial associations which I have recommended.

The majority of those in attendance at the annual meetings do not have the opportunity, time, or inclination to keep informed on the business and routine affairs of the Association. Most members go to the meetings for information, for rest and for recreation. I suggest that careful consideration be given the matter of conserving time at the meetings by requiring shorter addresses, briefer reports, limiting discussions and by reducing the number of business sessions, and such additional action be taken as may be necessary to eliminate the wasting of time in carrying out the A. V. M. A. program at the time of the annual convention.

WOMEN'S AUXILIARY

This address would not be complete without a word concerning the Women's Auxiliary. As the name implies, the Auxiliary supplements the work of the A. V. M. A. and in carrying on the members of the Auxiliary are doing a splendid service. While it is not a function of the president of the A. V. M. A. to deal with the Auxiliary, I feel that it is incumbent upon me to speak a

word of commendation and praise for the splendid efforts of the women in developing the work of the Auxiliary and enlarging its field of usefulness to veterinary medicine.

The Women's Auxiliary was formed in 1917 to give relief to families of veterinarians who were killed or wounded in the war. Later the Auxiliary established a Student Loan Fund to lend money to students who were unable to complete their courses without financial help. Where could we find a more worthwhile and noble purpose?

We hear from veterinarians and others concerning the progress that has been made in veterinary medicine and the accomplishments of the veterinary profession. Seldom do we hear, however, as to the important part which the women have taken in the upbuilding of the profession.

Last year the president of the Auxiliary made this wonderful statement in her presidential address:

We are proud of our husbands and of the great advance they have made in the last few years. We are proud of the wonderful work they have done in the control and eradication of animal diseases that are communicable to man. I am sure that we are all willing to help our husbands in every possible way.

In behalf of the members of the A. V. M. A. I desire to express grateful appreciation to the women for their contribution to veterinary medicine. We men should ever be mindful of the inspiration and encouragement the women have given us and the sacrifices they have made in our behalf.

The Women's Auxiliary is an important and growing organization with a serious purpose in veterinary medicine. It should receive the encouragement, and support of not only veterinarians themselves but of their wives, mothers and daughters as well.

In bringing this address to a close, I desire to emphasize that the A. V. M. A. must, if it ever will fulfill to the fullest extent its purpose in veterinary medicine, adjust itself to meet the new conditions and solve the veterinary problems as they arise from time to time. Furthermore, this association should continue to be a moulder of sound public opinion regarding veterinary medicine and a potent force in the development of the live stock industry.

The opportunities for veterinarians are greater today than at any time in the history of the profession. If the members of our honored profession will keep up to date in their knowledge of veterinary science and in its application, take advantage of the opportunities offered, be forward-looking and optimistic,

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The opportunities for veterinarians are greater today than at any time in the history of the profession. If the members of our honored profession will keep up to date in their knowledge of veterinary science and in its application, take advantage of the opportunities offered, be forward-looking and optimistic,

then I say that the future of veterinary medicine will be secure.

These things I have mentioned as being among the important problems in veterinary medicine we veterinarians must meet and surmount. We can do it but not without foresight, orderly procedure and determination.

Having brought with us to this annual meeting, our fervor, our hopes, our aspirations and our problems, let us remind you that what is done here or elsewhere for veterinary medicine should be brought about through the energy and initiative of the profession itself.

I am hopeful that this will be a successful meeting and that all present will have a pleasant and profitable time.

U. S. Civil Service Examination

The United States Civil Service Commission announces an open competitive examination for junior veterinarian and junior veterinary sanitarian (dairy) to fill vacancies in the position of junior veterinarian in the Bureau of Animal Industry, Department of Agriculture, for duty in the field; a vacancy in the position of junior veterinary sanitarian (dairy) in the Food, Drug and Insecticide Administration, Department of Agriculture, for duty at Rouses Point, N. Y.; and vacancies occurring in positions requiring similar qualifications. The entrance salary for junior veterinarian is \$2,000 a year. The entrance salary for junior veterinary sanitarian (dairy) ranges from \$2,000 to \$2,500 a year. Higher salaried positions are filled through promotion.

Competitors for junior veterinarian will be rated on theory and practice of veterinary medicine, and on veterinary anatomy, physiology, pathology and meat inspection. Competitors for junior veterinary sanitarian (dairy) will be rated on theory and practice of veterinary medicine and on milk hygiene, including dairy and milk plant sanitation.

Applications for this examination must be on file with the Civil Service Commission at Washington, D. C., not later than September 10.

Full information may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the United States Civil Service Board of Examiners at the post office or custom house in any city.

THE 1929 OUTBREAK OF FOOT-AND-MOUTH DISEASE IN CALIFORNIA*

By J. R. MOHLER, *Washington, D. C.*

Chief, Bureau of Animal Industry, U. S. Department of Agriculture

The veterinary profession of the United States has been successful in eradicating promptly every outbreak of foot-and-mouth disease that has appeared in this country. So highly infectious is this foreign malady that prompt and drastic eradication measures are necessary to prevent its rapid spread with resulting heavy losses to agriculture and industry. The recent outbreak of January, 1929, in California, was eradicated within two months following its discovery—a record achievement—and our country is again free from this foreign plague. The source of infection in this last outbreak has been definitely traced to the trimmings from fresh meat brought into the country as ship stores by a merchant steamship in direct violation of B. A. I. Order 298, issued September 17, 1926.

The Bureau of Animal Industry has an established method of combating outbreaks, which has the hearty approval and support of state live stock sanitary authorities and the live stock and allied industries. The Congress provides funds immediately available to carry our method of attack into effect in event of an outbreak.

The Bureau and the states together have a trained, experienced force of veterinary foot-and-mouth disease fighters that is not equalled in any other country. Supplies used in eradication work are stored at different points, ready for use in an emergency. The states, with very few exceptions, now have laws which enable them to join the federal government without delay, in attacking an invasion of the disease.

There exists a splendid spirit of cooperation among federal, state, municipal and county live stock officials, veterinary practitioners, live stock, transportation, and public market organizations, live stock owners, and the press in foot-and-mouth disease matters, which cooperation has been and always will be essential to secure the most speedy results.

The United States has national laws and regulations intended to guard our live stock industry, as far as we know how, against

*Presented at the sixty-sixth annual meeting of the American Veterinary Medical Association, Detroit, Mich., August 13-16, 1929.

invasions of foreign animal diseases, and all branches of the federal government cooperate willingly and earnestly in strengthening our barriers.

Notwithstanding laws, regulations, vigilance and cooperation, the virus of foot-and-mouth disease has passed our barriers and made its appearance in the United States nine times during the past sixty years. And, irrespective of every precaution that can be taken, the prevalence of foot-and-mouth disease in practically all countries with which we are engaged extensively in foreign commerce, precludes the possibility that we will be exempt from occasional outbreaks. However, the Bureau is using every reasonable precaution and is prepared to deal promptly with any outbreaks that may occur. Such an outbreak should not be the cause for undue alarm but rather for energetic cooperative action to repulse again the thrust of this disease against our cherished live stock industry.

VALUE OF RESEARCH WORK ON THE DISEASE

We are further handicapped by the fact that in spite of the diligent researches of the most resourceful scientists of the world, the causal agent remains elusive. The information that has been developed during recent years through the work of the British Foot-and-Mouth Disease Research Committee and our own Foot-and-Mouth Disease Commission, which went to Europe in May, 1925, to study this disease, is proving helpful in formulating protective and repressive measures, especially the information in regard to the survival of the virus in the tissues of animals slaughtered for their meat, and on certain substances that commonly enter international commerce. The danger of infection through importing fresh meat from countries infected with foot-and-mouth disease was not generally, or properly appreciated before the publication of the findings of the British Foot-and-Mouth Disease Research Committee in its Progress Reports. In this connection, I wish to refer briefly to the source of infection in the recent outbreak of foot-and-mouth disease in Los Angeles County, California.

HISTORY OF THE 1929 OUTBREAK

The origin of the 1929 outbreak in Los Angeles County, California, is of special interest since it was our latest invasion.

On October 6, 1928, the S.S. "City of Los Angeles," of the Los Angeles Steamship Company, left the port of San Pedro, California, for a South and Central American cruise. On November

2, 1928, she took on board at Buenos Aires, approximately 18,000 pounds of fresh meat consisting of beef, pork, mutton, lamb, and veal; also, approximately 4,800 pounds of ham, tripe, kidneys, sweetbreads, tongues, frankfurters, bologna, head cheese, liver, sausage and lard. The beef was in quarters and the rest of the fresh meat in whole carcasses. When the ship returned to her home port, Wilmington, California, on December 9, 1928, there remained on hand approximately 8,000 pounds of this fresh meat and 2,900 pounds of the cured meat. On December 20, 1928, approximately 2,500 pounds of the fresh meat and 1,200 pounds of the cured meat of South American origin were transferred from the S.S. "City of Los Angeles" to the S.S. "Caliwail" of the same line, before her departure from Wilmington for Honolulu two days later. The S.S. "Caliwail" sailed for Honolulu on December 22, 1928; the S.S. "City of Los Angeles" followed the "Caliwail" on December 29, 1928, each having among its ships stores some of the remaining fresh meat from South America. All this meat was used up before the ships returned to the home port on January 12 and 18, 1929, respectively.

The trimmings cut from the meat as it was being transferred to the "Caliwail," also the trimmings from the meat used on the S.S. "City of Los Angeles" while it was in the home port from December 9 to 29, 1928, were deposited in garbage-cans with other garbage. A regulation of the California State Plant Quarantine Department requires that all garbage collected on ships that have visited foreign ports must be steamed under specific conditions before its removal, for the purpose of destroying any foreign insect pests which may be lodged in the vegetable matter. In applying steam the nozzle of a steam-hose is stuck down into the garbage in each can and held there from five to ten minutes. At best, steam applied in an open vessel as required to destroy insects would not be effective in killing the virus of foot-and-mouth disease in garbage containing considerable meat trimmings.

According to the best information obtainable, garbage was removed from the S.S. "City of Los Angeles" on December 20, 22, 24, 26 and 29, 1928. This garbage was collected by George Sterling for the San Pedro Commercial Company, whose plant is located about three miles northeast of San Pedro. Sterling received the garbage over the side of the ship into a steel dump-truck and hauled it to the San Pedro Commercial Company's

plant, where it was dumped into a large hopper of about 12 tons capacity. The garbage was sold to Mr. Frank B. Haas and Russell & Knight, owners of large hog-ranches, who hauled it to the ranches in their own trucks. Mr. Haas received all of the garbage that was collected from the S.S. "City of Los Angeles" on December 29. Foot-and-mouth disease appeared on the Haas ranch, where 2,271 hogs were being fed, but the Russell & Knight ranch escaped infection. As the ship garbage was of better quality than that collected from city homes and hotels, it was fed to the hogs that were being finished for marketing.

DISCOVERY AND DIAGNOSIS OF THE DISEASE

Mr. Haas first noticed lameness on January 10, in one of the pens receiving this garbage. On the following day, January 11, he noticed six lame hogs in this pen, but thought little of it, since lameness is very common among garbage-fed hogs. He did not visit the feed-lots on Saturday, January 12. On Sunday, January 13, he was surprised to find a larger number of lame hogs in the pen where the first lame hogs were observed and a few in an adjoining pen.

There exists in the County of Los Angeles a veterinary organization, known as the County of Los Angeles Department of Livestock Inspection, under the able direction of Dr. L. M. Hurt. Dr. L. F. Conti, an employe of this organization, was assigned regularly to work in the territory where the Haas hog ranch is located. When Mr. Haas became perturbed on Sunday, January 13, he tried to get in touch with Doctor Conti by phone, but failing he left word for him to call at the ranch the following morning. On Doctor Conti's arrival early on Monday morning, January 14, he found at least 100 lame hogs showing high temperatures, but at that time found no characteristic lesions of foot-and-mouth disease. He marked some of the most suspicious animals and watched for the development of vesicles. Doctor Hurt was advised of the condition and on visiting the ranch later that day, he, with Doctor Conti, inoculated two calves, a horse, and a number of pigs with material from infected hogs, quarantined the premises and notified Dr. Rudolph Snyder, inspector in charge of the Bureau's cooperative animal-disease-control work in California. Dr. Jacob Traum, of the University of California, Dr. J. P. Iverson, State Veterinarian, and other officials also were notified. Doctor Snyder arrived at the ranch on the morning

of January 16 and on the evening of that day wired a night letter to the Bureau as follows:

Have condition in 3500 hogs believed to be F. and M. Six lame Friday three hundred affected today. Vesicles on snout feet and dew claws temperature up to 106 F. Pigs guinea pigs calves and horse were inoculated Traum Hurt and myself investigating Doctor Iverson here tomorrow. Herd well isolated four miles west of Whittier.

In a letter of January 18, Doctor Snyder said:

On my visit to the ranch Wednesday, January 16, there were approximately three hundred hogs showing symptoms of the disease. Not many vesicles were noticed in the forenoon, but before evening vesicles of large size were easily discernible upon the snout and feet of a large number of animals.

On Tuesday, Doctor Conti marked a number of animals which were running a degree of temperature. He noticed a number of them with temperatures ranging to 106.2 degrees. It is interesting to note in this connection that the hogs which were running high temperatures on Tuesday, were the ones which showed the largest number of vesicles on Wednesday. The temperatures of these same animals on Wednesday were normal to 102 degrees.

On January 17, the inoculation tests proved positive, except in the horse, while a cow kept on the premises developed the disease through natural exposure. A federal quarantine was issued on January 19, and all the infected and exposed animals were slaughtered and buried on that day.

In referring to this herd, Doctor Snyder stated in a letter of January 21:

The infection on the Haas ranch was becoming extremely virulent by Saturday, having spread to three additional pens, involving approximately 600 animals. An interesting feature of the symptoms and lesions noted in this outbreak was the extremely large vesicles on the snout, in the interdigital space and around the dew claws. The vesicles on the snout, instead of appearing on the end were all on the upper side and were extremely large, a number of which were capable of holding at least a half-ounce of fluid. Judging from the break which appeared in one pen of pigs which had been in the feed lots only five days, we are of the opinion that the period of incubation of infection in this outbreak is approximately five days. This is considerably longer than I would anticipate were the outbreak to become widespread.

DISEASE ERADICATED

For a week after the slaughter and burial of the hogs on the infected ranch, no new cases of the disease appeared. But on January 30, after ten days had elapsed, a nearby herd of 51 dairy cattle was found infected and was appraised, slaughtered, and buried the following day. Adjoining the latter premises was a dairy herd composed of 75 cattle which developed symptoms on February 2. This herd likewise was disposed of early the same night. A fourth herd, containing 33 dairy cattle, was discovered to be infected at noon on February 6 and was appraised, slaughtered, and buried that afternoon. The fifth and

TABLE I.—*Statistical summary of the outbreak of foot-and-mouth disease in Los Angeles County, California, in 1929*

OWNER AND ADDRESS	OUTBREAK DIAGNOSED 1929	ANIMALS AFFECTED OR EXPOSED			DATE OF SLAUGHTER (1929)	DISIN- FECTION ¹ COMPLETED (1929)	APPRAISED VALUE OF ANIMALS SLAUGHTERED
		CATTLE	SWINE	GOATS			
Frank B. Haas, Rivera.....	Jan. 17	1	3,271		Jan. 19	Feb. 2	59,822.60
A. J. Keel, Bell.....	Jan. 30	51			Jan. 31	Feb. 5	10,580.00
Parsons & Son, Los Angeles.....	Feb. 2	75			Feb. 2	Feb. 7	15,500.00
David Jorritsma, Hynes.....	Feb. 6	33			Feb. 6	Feb. 8	6,410.00
Geo. Stepanian, Downey.....	Feb. 16	67			Feb. 16	Feb. 20	10,865.00
29 Owners of exposed live stock in vicinity of infected premises.....		50	20	23			4,361.40
		277	3,291	23			107,539.00

¹Property to the extent of \$2,419.10 was destroyed, chiefly as part of cleaning and disinfecting operations.

last herd was found infected on February 16. This herd, containing 67 cattle, was likewise buried on the day of its discovery. Fortunately, no further signs of the disease have appeared and the federal quarantine was lifted on March 18, 1929. This order was virtually an official announcement that the outbreak had been eradicated. It was of the shortest duration, and involved the smallest number of premises and animals of any of the outbreaks that the Bureau has combated. It also caused the least interference with agriculture and industry in the surrounding territory. The accompanying chart shows the number of animals slaughtered, their appraised value, and the cost of property destroyed in disinfecting the infected premises.

METHODS FOLLOWED

The methods used to suppress the disease closely paralleled those of former outbreaks with respect to general policy. Success in limiting the spread of infection to only five premises is attributed to the very prompt diagnosis and slaughter of infected and exposed animals. The use of chicken-wire fences for inclosing infected premises was a noteworthy detail of the work. The fences were not only an effective barrier to roving dogs, cats and poultry, but also excluded persons having no business on the premises. These barriers also gave assurance that hay, manure, and other possible carriers of the disease were not removed from the premises without authority from the inspectors. Another innovation was the use of sodium hydroxid for the disinfection of clothing worn by inspectors and other employees.

In outbreaks of foot-and-mouth disease previous to 1929, compound cresol solution, chlorid of lime, formaldehyde and bichlorid of mercury were the chemical agents used in our disinfection work. Cresol was eliminated in the last outbreak in California, as the conditions were favorable for the use of chlorid of lime and formaldehyde in disinfecting barns, stables, feed-lots and manure. Bichlorid of mercury was replaced in our list of disinfectants by sodium hydroxid as recommended by the United States Foot-and-Mouth Disease Commission, and was used for disinfecting rubber coats, gloves, and other clothing, worn by the men whose duties brought them in contact with infected animals and materials.

The granular form of this drug was used, as it is the most convenient form for our purposes. A 1 per cent solution was used for disinfecting rubber equipment, and 1½ per cent solution

for soaking overalls, cotton caps, gloves, and other wearing apparel. After soaking, the clothing to be worn by the men was rinsed in clear water before drying.

Sodium hydroxid was found very convenient, cheap, and effective. In some instances, it produced irritation of the skin and, to obviate this, each employe was supplied with vinegar to be used in a dilute solution as a wash for the parts coming in contact with the disinfectant. Wooden spoons were used for measuring the dry sodium hydroxid, and for stirring the solution. As this drug in solution deteriorates rather rapidly with age, only fresh solutions were used.

It was found that a hydroxid solution is not suitable for application to certain finished surfaces, as it injures paint and varnish. There is no doubt that sodium hydroxid would be very effective as a disinfectant for rough woodwork, floors, and for other purposes, for which the more expensive compound cresol has been used in past outbreaks. And laboratory experience indicates that when hydrated lime is added, the lime-sodium-hydroxid disinfectant keeps better, and is more powerful than hydroxid alone. Further, the addition of lime gives a color to the solution, which is helpful in determining its uniform application.

CAUSES OF FORMER OUTBREAKS REVIEWED

Undoubtedly the disease which appeared in Los Angeles County on January 10 was foot-and-mouth disease, contracted from South American meat.

The importation of this meat is regarded as a direct violation of B. A. I. Order 298, issued under the Act of February 2, 1903, an act which, among other things, is intended to prevent the introduction into this country of communicable diseases of live stock. The evidence in the case has been referred to the legal authorities of the Department for prosecution of the offenders.

Apparently this is not the first time that foot-and-mouth disease has been introduced into the United States through infected fresh meat. The hogs first infected in the 1914 outbreak were fed on scraps obtained from a local butcher in Niles, Michigan, who in turn purchased frozen meat from a dealer whose records showed that he had shipped to this butcher several thousands of pounds of frozen meat imported from South American countries. Incidentally, during this outbreak, infection in 22 herds was traced directly to feed and garbage, in most instances to

local garbage containing meat and milk obtained from infected animals before symptoms of the disease were in evidence.

A herd of 600 hogs which had been fed on garbage obtained from the Mare Island Navy Yard was the first to develop foot-and-mouth disease in the California outbreak of 1924. Just preceding this outbreak a naval vessel had arrived at the Mare Island Navy Yard, which had obtained its supply of meat at ports in the Orient, where foot-and-mouth disease existed.

During that outbreak infection among hogs in at least three garbage-feeding plants in southern California was traced to garbage which contained scraps of meat from carcasses of cattle slaughtered while in the infective stage of the disease.

The British order of June 2, 1926, prohibiting the landing in Great Britain of fresh meat from any country in Continental Europe was based on the fact that outbreaks of foot-and-mouth diseases in Scotland had been traced to infection introduced through the medium of infected pig carcasses which had originated in Holland and Belgium. The disease was communicated to live animals by scraps from these infected carcasses. An outbreak which occurred in Scotland in a piggery containing 600 animals was traced to garbage containing scraps from South American frozen meat.

PRESENT SAFEGUARDS AND OUTLOOK

When it was determined that the 1924 outbreak in California was caused by infected garbage collected from a naval vessel tied up at the Mare Island station, the Commandant, at my request, issued an order requiring incineration of all such garbage in the future. Later, the Secretary of the Navy upon my recommendation, issued a similar general order for the proper disposal of garbage on all ships of the U. S. Navy which might be carrying meats from countries infected with foot-and-mouth disease.

As a further safeguard against infection from garbage originating on vessels other than naval vessels, B. A. I. Order 298 was issued on September 17, 1926, under the act of February 2, 1903. This order prohibits the importation of all fresh or frozen beef, veal, mutton, lamb and pork from regions where foot-and-mouth disease or rinderpest exists, whether it be in quarters, small cuts or trimmings.

This order was supplemented on January 25, 1929, by B. A. I. Order No. 315, which prohibits the unloading from ships upon our mainland or within the 3-mile limit of garbage derived from

meats originating in regions where rinderpest or foot-and-mouth disease exists.

It may be that our laws and regulations will be violated from time to time. Every effort will be made to enforce them and when violations are detected the offenders will be prosecuted. It is the duty of state and county live stock sanitary authorities, municipal officials, and all others who are interested in our live stock industry to cooperate with the Bureau in protecting the United States against the invasion of all foreign contagious diseases.

ACKNOWLEDGMENTS

The writer desires to express his appreciation of the splendid spirit of cooperation that was manifested by all the cooperating forces. The State Department of Agriculture shared equally with the Bureau in the activities and responsibilities of eradicating the outbreak. California is fortunate in having a Department of Agriculture headed by such able and willing cooperators as Mr. G. H. Hecke, Director of Agriculture, Dr. J. P. Iverson, State Veterinarian, and Mr. Lee Strong, Assistant Director, the latter representing the State at the Los Angeles headquarters. Prominent among other active cooperators were Dr. L. M. Hurt, Los Angeles County Livestock Inspector, and his vigilant assistant, Dr. L. F. Conti, also Dr. Jacob Traum, of the Veterinary Division of the University of California, who gave valuable assistance in conducting diagnostic tests. Drs. U. G. Houck, A. W. Miller, G. W. Pope, field leader Rudolph Snyder, and other members of the Bureau performed their duties with characteristic efficiency. The live stock industry of the country is indebted also to the Los Angeles Chamber of Commerce and other organizations which rendered every assistance possible. The owners of live stock, not only of infected herds, but all surrounding herds, deserve credit for the manner in which they responded to the requirements, and it should not be forgotten that it was an alert live stock owner who first called attention to the unusual condition among his hogs, which proved to be foot-and-mouth disease.

WHAT HAVE YOU?

Dr. J. C. King, County Veterinary, has gone into the produce business at his home on North Broadway and will pay highest market price for produce.

Providence (Ky.) *Enterprise*

PROBLEMS IN VETERINARY PARASITOLOGY IN THE UNITED STATES*

By MAURICE C. HALL, *Washington, D. C.*

Chief, Zoological Division, U. S. Bureau of Animal Industry

In general, problems in veterinary parasitology are problems in applied zoology and veterinary medicine, and are of a practical nature intended to ascertain the answers to various questions which are the reasonable requests of the live stock industry for information. The live stock industry is one on which we depend for a large part of our food, clothing and, more or less, therapeutic preparations. Its importance is such that the requests of that industry for practical information must be taken seriously. As regards veterinary parasitology the questions in general may be stated or paraphrased as follows:

Are parasites causing injury to my live stock and financial loss to me? If so, what parasites are doing the damage? How did my live stock become infected? What damage is the parasite doing and how does it do it? And most often and urgently the live stock industry asks: "How can we save these animals and prevent future trouble?"

Finding the answers to these questions constitutes in general the broad problem in the field of veterinary parasitology. In order to answer these questions, investigations must be conducted in the fields of zoology, pathology, therapeutics, farm practice and other related fields. It may seem to the farmer, and even to some veterinarians, that the minute examination of a worm with the object of being able to attach to it a scientific name is a procedure of little practical importance. Nothing could be further from the truth. The identification of the parasite is comparable to the detection of the criminal responsible for a theft or murder, and errors in identification may lead to loss of time, money and human effort as certainly as does the conviction of the wrong person in our legal process.

Following the identification of the parasite, it is necessary to follow up its life cycle and ascertain its development within its host or hosts, and outside of the body of the host animal if it has such a stage. The situation here is slightly different from dealing with the human criminal in that a knowledge of a crim-

*Presented at the sixty-sixth annual meeting of the American Veterinary Medical Association, Detroit, Mich., August 13-16, 1929.

inal's habits is of value in the capture and control of the individual criminal, but in parasitology the knowledge of the habits and life history of a parasite species is applicable to millions of members of that species wherever they occur, and many of them will be of practically world-wide distribution, and any information in regard to them would be of world-wide application. Such information answers the question, "How did my live stock become infected?" It helps to answer the question, "What harm does the parasite do and how does it do it?" It is absolutely basic information in answering the question, "How can we save these animals, and how can we prevent future trouble?"

We know that our live stock is infested with hundreds of species of parasites. At the present time we can safely say that we do not know how many kinds are present in any given kind of live stock in the United States, but we feel reasonably sure that there are parasites present of which we are yet unaware. We know that we are ignorant of the life histories of the large majority of these parasites. Of all the known tapeworms in the world we know the life history of perhaps one per cent, and the case is but little better, if at all better, for the parasitic round worms and flukes. Until we have much of the information which is now lacking we shall be unable to separate major offenders from minor offenders. We shall be unable to devise satisfactory means for saving infested animals or control measures for preventing future losses.

In the writer's opinion parasitic diseases are approximately as important as bacterial diseases. The bacterial diseases are spectacular, but they are more or less sporadic. They may be present at one time and absent for months or years, and they may be present at one place and absent at others at that time. On the other hand, parasites are ubiquitous and most of them are present throughout the year and every year. It is much easier to see the loss from bacterial diseases which strike suddenly and occasion severe losses at the time; it is much more difficult to detect the steady drain from parasites which manifests itself in animals which are in poor condition, unthrifty, and consequently capable of producing less meat, wool, milk, eggs or other things for which these animals are raised. Before the live stock industry can be relieved of many of the losses which it now suffers from parasites, it will be necessary to make extensive surveys to ascertain what parasites are present in this country and where they are prevalent, to work out the life histories of these parasites,

to ascertain their habits, to develop effective treatments and to devise satisfactory prophylactic measures to prevent future losses. With the number of men now engaged in the study of veterinary parasitology in this country it would probably be a matter of centuries to secure satisfactory answers to these questions. Scientific research is a slow procedure even when pursued intelligently. It is not conceivable that the live stock industry would care to wait for centuries for the control of losses in that industry once the industry is convinced of the existence and importance of these losses. If more rapid progress is to be made it will require many additional workers in the federal, state and college forces, and the provision of this increased personnel will call for increased investments in research. Not the least of the problems in veterinary parasitology today is the problem of securing a personnel adequate for the solution of the problems in veterinary parasitology in this country within a reasonable time.

As funds become available for additional work, and as additional workers are taken on, there will arise the question as to what problem in parasitology should be attacked. For the most part these problems will have to be set up as specific projects and we turn now to a consideration of some of the investigations which must be carried out in order to answer the stockman's questions as outlined in this paper.

"Are parasites causing injury to my live stock and financial loss to me?" There is much too little known about the distribution of parasites in the United States and about the pathogenicity of those that are known. The technic of examining animals for parasites is not so widely known or so generally applied in practice as should be the case. Every year we learn more about the extent and prevalence of losses from parasites, and up to the present time we have constantly found that our estimates of damage were underestimated. There is little likelihood that we shall soon overestimate these losses. As a basic problem it should be worked out by every parasitologist in the state in which he is working. We have the questions: "What parasites of live stock are present in this state?"; "What parasites are being introduced from other states?"; "What areas are infested and which are free?" and "What factor accounts for the presence or absence of the parasite? Is it a matter of stock movement or of local conditions?" For the United States as a whole we know the distribution of our parasites for the most part only very sketchily. The Texas fever tick and the Texas fever organism

are well known to be confined to certain areas, which areas change their boundaries yearly by virtue of eradication measures. The distribution of the ox warbles is fairly well known, but these areas change their boundaries to some extent by virtue of spread. It is obviously unsafe and unsound to have parasites present and their presence unknown. Until we have had a large amount of survey work we shall continue to have very vague ideas in regard to the distribution of parasites in this country.

"If parasites are causing injury to live stock, what parasites are doing the damage?" This question can not always be answered readily by a sketchy postmortem examination or a sketchy fecal examination. Some of our most highly pathogenic worms, such as the salmon poisoning fluke, are very small and easily overlooked. We must have a better technic for our work and must apply that technic more generally, and must be less easily satisfied with what meets the eye on first glance. Much more intensive work must be done than has been done, before one can answer with any great degree of probability for many conditions the question as to what parasite is causing the damage. Here then is a problem which can be attacked to advantage in any state: What minute parasites, not heretofore reported from live stock in this state, are present and in association with disease conditions which might be attributable to these parasites?

"How did my live stock become infected?" This question opens another bag of problems. How do sheep, cattle and horses become infested with their anoplocephaline tapeworms? Do these worms have intermediate hosts? We don't know. What is the life history of the large American fluke, *Fasciola magna*? We don't know. What is the intermediate host of our swine, dog and cat lung flukes? We don't know. *Haemonchus contortus* and some species of *Cooperia* and *Ostertagia* invade the mucosa of the digestive tract at some stage. Do other species of these genera or related genera of trichostrongyles invade the mucosa? What infestations may be picked up in the stable? What are the intermediate hosts of the numerous spirurids and filarids of our domesticated animals? For the most part we don't know. What are the intermediate hosts of our bird tapeworms? We know some, but there are probably scores of hosts for the tapeworms of poultry still unknown to us. We know the life history, as we have said, of about one per cent of the known tapeworms. Here is material for many investigations for many years.

"What damage does the parasite do to my live stock and how does it do it?" We have just recently learned that ascarid larvae cause pulmonary lesions. Is it likely that that closes the chapter of worm parasites not suspected of causing pulmonary lesions but actually causing them? What harm is done by the gizzard worms, crop worms, proventricular worms, nodular worms, sheep tapeworms, and species of *Cooperia*, *Ostertagia* and *Nematodirus*? What harm is done by cyclostomes, dog tapeworms, the various whipworms? What are the definite lesions and symptoms caused by these parasites? What are the correlations with age, food, vitamins and number of worms present? All of these things need experimental study in pure infestations and almost nothing of the sort has been done. All of them need more careful clinical examination in practice.

"How can we save these animals and prevent future trouble?" We have some good insecticides. We need better ones in many cases. We have a few good anthelmintics for a few parasites. What are we to do to remove the small trichostrongyles of sheep and cattle, some of them known pathogens? To remove the stomach worms of swine and horses? The crop, gizzard and proventricular worms of poultry? Whipworms, capillarids, nodular worms? How are we to make specific recommendations for prophylaxis in the case of tapeworms, flukes and nematodes requiring intermediate hosts when we do not know these hosts? How long is a pasture infective for sheep, cattle or horses as regards the numerous strongyles of these animals? How long do eggs and larvae of the various swine parasites remain alive in the hog-lot or on the pasture under different seasonal and general climatic conditions? Laboratory experiments do not answer these questions. They call for pasture experiments of a rather careful and detailed sort. Nor is it sufficient to answer these questions for one state and assume that that is the answer for all states. How should we prevent kidney worm infestation in swine? How should we dispose of manure safely without losing its fertilizer value? How can we set up pasture rotation systems without knowing the length of time the parasites on the pasture remain infective? What are the correlations of wild animals and birds and of our domesticated live stock and poultry as regards parasites? We have plenty of evidence to show that parasites of deer and other wild ruminants are still adapting themselves to our sheep and cattle, and that our sheep and cattle parasites have been transmitted to these wild ruminants. Parasites of

wild birds are still being carried over as parasites which we are finding for the first time in our poultry. All of these new acquisitions must be regarded as potentially dangerous. We have more or less ignored the parasites of our wild animals on the assumption that the important things were those already known from live stock. Let us keep in mind in this connection that some of our most dangerous parasites appear to be a present to our domesticated animals from the wild animals of this continent. The list of parasites of some economic importance, or even of great economic importance in this country, which have been acquired from the native animals, includes the kidney worm of swine, the small red stomach worm of swine, the nodular worm of sheep, the fringed tapeworm of sheep, the large American liver fluke of cattle and sheep, and the gapeworm of turkeys and chickens. When we know more about it, we shall have a larger list. The process of evolution has not ceased nor have parasites lost their ability to adapt themselves to new hosts. It is well known that parasites and bacteria adapting themselves to new host species, or to groups of a given species not previously parasitized, are commonly much more deadly than in the ancient hosts which have established a certain degree of tolerance for these parasites.

What we know about any given subject is probably less than one per cent of what we should know. This is especially true of the field of parasitology. It abounds in problems and our present methods of control are largely makeshift arrangements full of glittering generalities such as vague recommendations of sanitation in general, instead of specific terms. The Bureau of Animal Industry is doing what it can in the way of basic research essential to the recommendation of control measures, and in the way of developing and applying these control measures. In self defense, however, the Bureau must constantly urge that more research is necessary throughout the entire United States before intelligent specific measures for the control of most of our parasitic diseases can be made. No contribution which the Bureau of Animal Industry could make to the subject of parasitology in the way of research or control, could have greater potential benefits than could be expected if the Bureau's repeated recommendations for more research in this field by state, college and university agents could meet with a general response. The problems are so numerous and so definitely correlated with local conditions that every state with a live stock or poultry industry should have at least one parasitologist working on its problems of parasitism in these

animals, and the states with an industry of any magnitude should have several parasitologists. In this connection the Bureau has repeatedly offered to cooperate in every way possible in making identifications of parasites, in offering suggestions, advice and information, and in rendering whatever assistance it possibly can. Wherever states have taken advantage of this offer the Bureau has gladly assisted and it has been our pleasure to cooperate with various states and with our colleagues in Canada, Mexico and elsewhere. This cooperation has been mutually beneficial. It is the Bureau's hope and desire that we may have more of it in the future, and that in time with a really adequate force of workers, including not only the investigator but the practicing veterinarian with his exceptional facilities for clinical observation, we shall be in a position really to control our parasites of live stock and poultry. In some cases we shall be able to attain eradication, and I do not think that it is too optimistic to say that we shall ultimately eradicate some of the parasites which at present we are hardly able to control at all, and for which no one has yet been rash enough even to suggest the possibility of eradication.

Finally, it is time to emphasize the fact that in solving our problems in veterinary parasitology we must do better work and must think more carefully than we have in the past. In any line of work, most of the workers and most of the work are mediocre; this holds for all occupations from bootblacks and ditch diggers to presidents, kings, professional men and scientists. The bulk of scientific and professional work is casual and lacking in careful and accurate thinking. Our progress is made for the most part on the basis of the one occasional piece of good work, rather than on the many casual and slipshod pieces of work.

We must realize that either in the clinical observations of the veterinarian or the field of veterinary research, a failure to keep checks usually invalidates the work as far as any definite conclusions applicable elsewhere are concerned. If all the animals of a herd are treated in one way, little can be concluded if good results do follow. There is always the possibility, and often the likelihood, that if half the animals were left untreated the same results would have been obtained in both groups. If certain symptoms are associated with a certain disease, it does not follow that they are part of that disease; they may follow from a concomitant condition. If certain lesions are found after the use of a given drug, it does not follow that the drug produced the

lesions; they may have been there to begin with, and only the use of a sufficient number of untreated check animals will establish a connection between the treatment and the lesions or rule out the connection.

We must try to avoid the *post hoc, ergo propter hoc* line of reasoning. It is not sufficient to note that there is a chronological sequence of events in order to establish the earlier events as the cause of the later events. The connection between cause and effect must be established on a sounder basis than this.

It is not an uncommon experience for the writer to read articles by veterinarians who take exception to the writer's findings in the field of anthelmintic medication. Occasionally he has written to these veterinarians pointing out misunderstandings or failures to read other papers by the writer. Printed controversies have been avoided as unprofitable and undesirable. However, in connection with this matter of improvement in our methods of attacking problems, the writer takes occasion to reiterate previous statements to the effect that the efficacy of anthelmintics can not be judged on the sole basis of worms removed and without a consideration of worms not removed, and that as a rule one must follow treatments by postmortem examinations if one is to obtain definite and dependable information.

One objection to the policy of not taking public exception to criticisms is that a person may be regarded as uncertain of his findings. As an illustration of this, the writer has learned that he is supposed to believe that santonin is better for ascarids than his printed works would lead one to think. Without controversial intent, he takes this occasion to say again that all the dependable scientific evidence of which he is aware indicates that santonin is distinctly inferior to chenopodium for the removal of ascarids. The only evidence he would accept would be that based on treatment followed by the collection of all worms removed and the subsequent collection postmortem of all worms not removed. Evidence based on the casual observation of ascarids in a hog-lot or a dog-cage can not be accepted. Fourteen years' experience along this line indicates that there are numerous pitfalls in anthelmintic work, and that casual work with no regard for these things must be thrown out as of little or no value. Work along this line can be judged, and perhaps accepted, only when complete protocols of the work are published. The worker's conclusions without his evidence can not be ac-

cepted. The authoritarian method in human knowledge has lost the standing it once had.

In all our work we must keep in mind that what we know is but a very small part of what might be known and should be known in order to obtain the best results. Others may think we know a great deal about a subject, but we must not delude ourselves about this; we don't know much about anything. One essential of scientific and professional work is that we keep an open mind on all subjects and stand ready, and not reluctant, but willing, to change our minds. When we can not change our minds to conform to new knowledge, we are dead, regardless of whether we are buried or not. No factor will be more valuable in solving our problems in veterinary parasitology than an open mind and a willingness to change it whenever sound evidence shows the need for a change. At the same time, we must not follow the path indicated by trivial arguments and inadequate evidence.

Revised Bulletin on Texas Fever

Farmers' Bulletin No. 569-F, "Texas or Tick Fever," has been revised by the U. S. Department of Agriculture and is now available for free distribution. In the revised edition are given latest scientific facts concerning the tick which conveys the infection of Texas fever, as well as various other harmless ticks which are sometimes found on cattle and other animals. The bulletin was prepared by Dr. John R. Mohler, chief of the Bureau of Animal Industry. The scientific studies underlying present methods of tick eradication are discussed, as well as the benefits to be derived from cooperating with county, state and federal live stock sanitary authorities in ridding the country of ticks and the diseases carried by them. The text is supplemented with numerous illustrations.

In discussing the losses occasioned by cattle ticks and the benefits of systematic dipping, Dr. Mohler states:

These appalling losses and the annual sacrifices of cattle-raisers of infected districts can be entirely effaced and at small proportionate cost; for with enthusiastic stockmen, satisfactory state legislation, sufficient money and a corps of trained inspectors the cattle tick may be exterminated and every dollar expended in this work will be returned many times during the succeeding years.

Copies of the Bulletin may be obtained free of charge on application to the U. S. Department of Agriculture, Washington, D. C.

A CONSIDERATION OF DISEASE ERADICATION IN POULTRY

By D. E. DAVIS, Petaluma, Calif.

The recent rapid growth of the poultry industry has developed the question of disease control. A number of authorities have recommended campaigns similar to that in progress on tuberculosis eradication in cattle. There may be need for organized disease control in some sections. However, legislation which might interfere with the interstate shipment of breeding stock or a nation-wide campaign of disease eradication in poultry at this time would seem premature and, therefore, would be inadvisable since it might do untold harm.

No one can reasonably doubt the immeasurable benefit to public health, in general, and to both the beef cattle and dairy industries which has been the direct result of the tuberculin test. When the federal government instituted the campaign of tuberculosis eradication, opposition was met on all sides, unforeseen obstacles arose, cooperation in many instances was lacking, but back of this "clean-up" program was an industry—the dairy industry, whose very life depended upon the control of this particular disease and as a result the serious obstacles were overcome.

The obstacles encountered in the federal tuberculosis campaign are, in part, those of a poultry disease control campaign. However, a campaign of eradication of the latter is beset with a multitude of problems which need not be taken into consideration with regard to the larger classes of live stock.

Does the high poultry population of the country place any widespread campaign for poultry disease control, such as tuberculosis or bacillary white diarrhea, beyond any reasonable degree of practicability? This question has been the subject of considerable debate among experiment station workers and poultry breeders during the past three or four years. Many valuable suggestions have been brought forth, but no feasible plan has yet been outlined which would be universally applicable.

In the early part of this century, Doctor A. R. Ward and Doctor V. A. Moore visited the Petaluma district and observed two distinct types of poultry husbandry: one a comparatively small area, of high concentration, devoted entirely to commercial egg-production, and the other a large area, of some 250 square

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miles of open range, devoted almost entirely to the production of hatching eggs. The latter is marked by groups of small, portable colony-houses, widely distributed over a section of rolling hills which are covered with growing grass a major portion of the year. One house in each colony is fitted with nest-boxes. The other houses contain only roosts and afford night shelter for the birds. It is in this environment, where Petaluma's breeding flocks are kept, that a unique type of housing and care of poultry has become a determining factor in disease control. Over a period of more than a score of years this system of poultry-keeping has been made an intricate part of a breeding plan which



FIG. 1. Poultry ranch near Petaluma.

has had as its specific goal the production of vigorous birds, free from disease and capable of withstanding most intensive poultry husbandry.

The breeding program which has been followed in connection with this free-range housing of matured stock has been, briefly, as follows: Double pedigreed, male birds of outstanding vigor from known high production parentage are mated with hens not less than one year of age which have been most rigorously culled. All birds which are not true to Leghorn type, of high vitality and as far as possible from external appearance capable of high egg-production, are rejected. The program calls for staffs of

trained specialists maintained by the different hatcheries, who rigidly inspect, cull and select, each season, every bird used for breeding purposes. Other features of the program are inspection at regular intervals, the discouraging of any forced feeding methods and the requiring of an adequate green feed supply throughout the year.

BABY CHICK MORTALITY

It is generally considered that an inherited disease will manifest itself in baby chicks during the first two weeks of life. It is interesting to note that, during the year 1927 and the first eleven months of 1928, one hatchery in this district sent out to its customers, with every order of baby chicks shipped, a card which was to be placed in the brooder-house and on which daily losses were to be recorded. At the end of two weeks this card was to be signed by the purchaser, who had supervised the actual brooding of the chicks, and returned to the hatchery. These shipments were made during every week of the year and included poultrymen of all classes of intelligence, who operated with various types of brooder equipment, in twelve western states. The 4,556,740 chicks reported upon showed a loss of 308,311 chicks (6.7 per cent). Every card returned was included in this computation and 67 per cent of the number of chicks shipped were reported upon by the purchasers. The average size of flock brooded was 1090 chicks.

The University of California Extension Specialist in poultry, Mr. W. E. Newlon, states that "the baby chick mortality in California is decreasing year by year, which is due, no doubt, to the progressive breeding programs which have been adopted by hatcheries and to better husbandry methods or management." This is indeed encouraging and indicates that management is an important factor in promoting and sustaining health in baby chicks.

AVIAN TUBERCULOSIS

It is interesting to know that in spite of an enormous poultry population, in the district where this type of breeding has been in vogue for many years, tuberculosis is almost unknown. During the past five years, more than 11,000 autopsies have been conducted at the University of California Avian Pathology Laboratory at Petaluma and less than twelve cases of tuberculosis have been recorded.

POULTRY PROBLEMS DIFFERENT

The poultry industry, being so entirely different from the other live stock industries, presents specific problems peculiar to itself and, therefore, it might be well to consider briefly some of the problems which are distinctly characteristic of the poultry business. Compare the average life (two and one-half years) of a commercial breeding hen with that of the average dairy cow.

The size and location of breeding flocks include small, backyard flocks in towns and cities, scattered farm flocks composed of a few hundred birds and breeding flocks in the poultry centers which number well into the thousands.

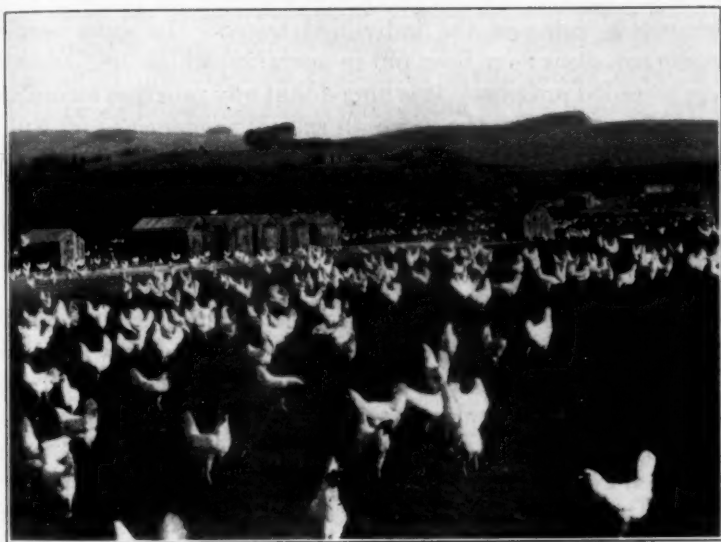


FIG. 2. A flock of vigorous, disease-free birds.

Compare the methods of handling poultry with that of larger animals. What is the annual replacement of breeders in the world of cattle? The annual replacement in poultry is approximately one-third in commercial poultry plants specializing in egg-production where regular and skillful culling is done. Contrast the difficulty of positive identification and the ease of transportation of entire flocks with that of other live stock.

The additional regulatory force, inspectors and clerical staff, required to conduct a poultry disease eradication campaign would be directly in proportion to the poultry population as compared with the cattle population. In some diseases of poultry,

testing can be done only at certain seasons of the year. Therefore, it would be difficult to estimate the number of workers necessary to complete the task and, very likely, impossible to obtain sufficient technicians to conduct the work during such a short period.

In addition to the above there still remains what is unquestionably the greatest factor in discouraging a "clean-up" campaign in poultry—the low economic value of the individual. It has been said: "When a chicken dies it is only a meal for the dog. When a pig dies the old man heaves a sigh, but when a cow dies the whole family goes into mourning." Will any live stock industry permit an annual test the expense of which is ten per cent of the marketable value of the individual tested? In some sections drastic measures have been put in operation which, undoubtedly, have retarded progress. It is hoped that any program formulated in the future will be free from all radical tendencies and will be marked with the same sane foresight as that of the Federal Accredited Plan.

The impossibility of adequate educational work being done with such an enormous number of people and because of the inability of reasonable supervision in an industry in which the producing units are so numerous, the value of the individual units so small and the geographical distribution so widespread, it would seem that the use of serological tests is greatly restricted in the control of infectious diseases. The possibility of interference with a legitimate wealth-producing activity should also be considered, when even the mildest of police authority is attached to the use of any disease control method which is difficult of effective enforcement.

Violator Fined

Porter Woods, of Iron River, Mich., was arraigned before Justice R. P. Hollow, of Crystal Falls, Mich., recently for violating the Veterinary Practice Act. Upon entering a plea of guilty, the violator was fined \$10.00 and costs. Dr. F. K. Hansen, of Marquette, assistant state veterinarian for the Northern Peninsula of Michigan, made the investigation and preferred the charges against Woods, who is said to have been called to attend a number of sick horses. He prescribed a concoction in which arsenic was the active principal. Nine of the horses died. The action of the medicine was so severe that it burned the hands of a number of the men around the barns who administered it.

THE TRANSMISSION OF BACILLARY WHITE DIARRHEA AMONG HENS*

By P. R. EDWARDS and F. E. HULL

Department of Animal Pathology, Kentucky Experiment Station,
Lexington, Ky.

The extent to which *Salmonella pullora* infection may be conveyed from hen to hen through contact is not definitely known. The control and eradication measures advocated by the majority of the agencies conducting campaigns against this disease are tacit admissions that there is danger of such transmission. These measures usually include provisions for immediate removal of all reacting hens from breeding flocks. However, a review of the literature discloses that most investigators have been unable to demonstrate any transmission of the disease among hens unless male birds were present in the flock.

Rettger and Stoneburn,¹ in 1911, stated that, while they had no direct evidence concerning transmission from hen to hen through contact, they considered it improbable that infection was conveyed from adult to adult in this manner. One year later, Rettger, Kirkpatrick and Card² published the results of experiments bearing on this subject. They placed seven infected hens in a pen with seven hens which were thought to be free of the disease. These hens were kept together for a period of twenty-two months. Four of the non-infected hens survived throughout this period and at the end of the experiment three were found to be carriers of *Salmonella pullora*. This experiment was performed before the agglutination test was used for the detection of bacillary white diarrhea. The hens selected as non-infected came from a flock in which no bacillary white diarrhea was known to be present. The eggs laid by these hens were examined for a long period before the start of the experiment and *Salmonella pullora* was not isolated from them. While it is true that this experiment may be criticized because of the methods available at that time, it is very probable that transmission of the infection actually occurred.

Doyle³ kept fifty hens which reacted to the agglutination test and thirty hens which did not react to the test in contact for

*The investigation reported in this paper is in connection with a project of the Kentucky Agricultural Experiment Station and is published by permission of the Director.
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one year. Agglutination tests performed at monthly intervals indicated that there was no transmission of infection during the course of the experiment. Bunyea⁴ placed a non-reacting hen in a pen containing eleven reactors and allowed it to remain there for 76 days. At the end of this time, the non-reacting hen showed no evidence of infection. Dalling, Mason and Gordon⁵ state that infected hens apparently do not transmit the infection to normal hens or chicks. Brunett³ placed seventeen non-reacting hens in contact with twenty reacting hens for a period of seven months. During this period he could observe no transmission of the disease to the non-infected hens. The agglutination test was used as a means of determining infection. He concludes that "we may assume that mature hens do not ordinarily become infected by association with other mature stock." Non-infected male birds were placed with the hens after they had been in contact for seven months. Transmission of the disease was then observed.

EXPERIMENTAL WORK

In the present experiment, 73 hens which yielded positive reactions to the agglutination test were kept during one year in a house with fifteen hens which did not react to the test. The hens were allowed to range over a large yard at all times. The dimensions of the house were 15 by 30 feet. The hens were trapped in order to minimize the possibility of transmission of infection through the ingestion of eggs containing *Salmonella pullora*. The non-reacting hens were obtained from a breeding flock which had been tested for bacillary white diarrhea at regular intervals for several years. All these hens had been tested on two previous occasions, at intervals of six months, and in each instance had given negative reactions to the test. They were tested a third time shortly before the beginning of the experiment and showed no evidence of being infected. These hens were two years old at the beginning of the experiment. The majority of the infected hens were also two years old, although a few of them were three and four years old. After being placed together, the hens were tested monthly. In performing the tests two dilutions were used, 1:40 and 1:80. The presence of the agglutination at a dilution of 1 to 40 was considered indicative of infection. At the end of the experiment the surviving hens were slaughtered and examined for the presence of *Salmonella pullora*. The results of the agglutination tests and the results of the postmortem examinations are given in table I.

TABLE I—Agglutination Tests

BIRD	DATE												Post-MORTEM EXAMINATION
	1-24	2-24	3-23	4-25	5-24	6-25	7-25	8-23	9-25	10-24	11-26	12-18	
H1	—	—	—	—	—	—	—	—	—	—	+	+	+
H3	—	—	—	—	—	—	—	—	—	—	—	—	—
H19	—	—	—	—	—	—	—	—	—	—	—	—	—
H49	—	—	—	—	—	—	—	+	—	—	+	+	+
H62	—	—	—	—	—	—	—	—	—	—	—	—	—
H71	—	—	—	—	+	—	—	+	+	+	+	+	+
H81	—	—	—	+	—	—	—	—	—	—	—	—	—
H90	—	—	—	—	—	—	—	—	—	—	—	—	—
H114	—	—	—	—	—	—	—	—	—	—	—	—	—
H203	—	—	—	—	—	—	—	—	—	—	—	—	—
H204	—	—	—	—	—	—	—	+	+	+	+	+	+
H205	—	—	—	—	—	—	—	+	+	+	+	+	+
H776	—	—	—	—	—	—	—	—	—	—	—	—	—
H798	—	—	—	—	—	—	—	—	—	—	—	—	—
H105	—	—	—	—	—	—	—	—	—	—	—	—	—

—, no agglutination at 1:40 or 1:80.

+, complete agglutination at 1:40, no agglutination at 1:80.

+*, definite but incomplete agglutination at 1:40, no agglutination at 1:80.

++*, complete agglutination at 1:40, definite but incomplete agglutination at 1:80.

+++, complete agglutination at 1:40 and 1:80.

Postmortem examination:

+, *Salmonella pullorum* isolated.—, *Salmonella pullorum* not isolated.

From table I it can be seen that eleven of the fifteen negative hens were living at the end of the experiment. Four of the hens died of intercurrent disease during the course of the investigation. None of these four hens gave a positive agglutination test while living, and *Salmonella pullora* could not be isolated from any of them on postmortem examination. Of the eleven hens which survived the experiment, five apparently became infected during the year. One hen became positive during the third month, one during the seventh month, two during the eighth month and one during the tenth month of the experiment. *Salmonella pullora* was recovered from the ovaries of each of these hens. The other seven hens which survived the course of the experiment never gave a positive test and *Salmonella pullora* was not isolated from them on postmortem examination.

We believe that the foregoing facts indicate that bacillary white diarrhea is transmitted from hen to hen by contact. The negative hens used in this experiment were hatched from tested stock and no deaths due to bacillary white diarrhea occurred among the chicks. The hens were tested three times before the start of the experiment and gave negative tests each time. In view of these facts it is highly improbable that the hens were infected at the beginning of the experiment.

The results of this work confirm the earlier investigation of Rettger, Kirkpatrick and Card² and indicate that transmission of bacillary white diarrhea among mature hens may occur without the presence of male birds.

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AGAIN AT LIBERTY

Dr. A. H. Collins, who has had charge of the waterworks pumping station for the past nine years, eight of which he served without the loss of a day, is again at liberty to resume his veterinary practice and is ready to answer all calls for his services along that line.

The Board of Public Affairs have recently electrified the pumping machinery, thus doing away with the services of a man.

New London (Ohio) *Record*

ARTIFICIAL INSEMINATION AND BREEDING HYGIENE

By J. F. BULLARD, *Lafayette, Indiana*

*Department of Veterinary Science
Purdue University Agricultural Experiment Station*

The breeding season of our domestic animals extends throughout the entire year. With each species of animals there is a more or less well-established time when breeding is done. With the different breeds and types of horses, the breeding season is somewhat changeable because of certain conditions which make it necessary to practice breeding at different seasons. In the warmer sections of the country, breeding begins in the late winter and early spring, so that the young may arrive early. On the other hand, in more northern parts the season is so regulated that the foals will come later in the spring, and even summer and fall, when the weather is better adapted for them to get a good start.

With some types of light horses, as represented by the Thoroughbred, an entirely different situation exists. With this type the months of February, March, April and May cover approximately ninety per cent of the time that is allotted for the breeding season. June, or at least not later than the middle of the month, takes care of practically all the late mares that are to be bred. The main reason for starting breeding about February first is due to the fact that foals dropped as soon after January first as possible are desired. This may be easily explained by the fact that all foals born, no matter at what time during the year, are classified as yearlings on the first day of January of the next year. This is important in regard to classification of horses for racing purposes.

SANITATION

There are many factors which influence the percentage of pregnancies in a band of brood mares. Unquestionably, the main conditions which assure the breeder a large crop of foals are normal, healthy mares with a good breeding record for past seasons and a good potent stallion that is known to get good foals. These of course are the most sought-for conditions, but can not be attained in many instances due to the high percentage of

mares which have bad breeding records, because of diseases of the genital tract. The more important diseases that are responsible for sterility are metritis, cervicitis, salpingitis and pyometra, caused in many instances by certain microorganisms. Various tumors, fibroid conditions resulting from injuries during parturition, numerous ovarian disorders, and so forth also are responsible.

Breeding occurs under extremely varied conditions, ranging from outside, dirty, dusty or muddy paddocks, to well-constructed breeding-sheds. In this paper, sanitation and hygienic measures will be emphasized, as such measures are paramount to successful breeding. Under the conditions just mentioned it may be noted that these measures may be carried out to advantage in some cases, while in others they are of little value.

The mare to be bred is brought to the breeding-shed and hopped, bridled and twitched. Next the tail is wrapped tightly with a clean, four-inch, cotton bandage so that when well-overlapped it extends for twelve or fifteen inches down the tail. In applying this bandage, it should be started as close to the base of the tail as possible and all hair should be included. Next the external genitals are washed with soap and warm water in order to remove all feces and dirt that may be present around the anus and vulva. The lather should then be removed by squeezing water-soaked cotton over the parts, followed by drying. It is well to separate the labiae of the vulva and wipe the adjacent parts with cotton, in order to remove soap suds, dirt and excretions which usually collect during the washing process.

A heavy, well-constructed bridle is all that is necessary for most stallions. In washing the penis and sheath, clean, fresh, warm water and castile soap are used, followed by rinsing with clean water. After service these organs are again washed with a mild antiseptic solution. A one per cent aqueous solution of a chlorin antiseptic is commonly used. A very good practice after this has been done is to apply vaseline to the penis and inside of the sheath. When the stallion is brought out for the next service the penis can be easily cleaned, as soon as erection has occurred, by taking dry cotton and removing the excess of vaseline. This has a two-fold purpose. It protects the penis and aids materially in loosening the dead epithelial cells and excretions which collect in the sheath. After this is completed, the penis is then washed as described above.

It is of advantage to have sufficient help present during breeding, but not too many helpers. One helper holds the mare's bridle and twitch, a second holds her tail and guides the stallion, and a third assists in steadying the stallion and mare. Many cases do not require any more helpers than mentioned, while with others additional help is necessary. The mare may be just going out of heat, she may naturally be quite nervous and a kicker, or she may be very docile and require very little assistance. The stallion is very often the one that needs special attention. The management, care and handling to which a stallion and mare have been accustomed is a very important factor in regard to behavior during breeding. An example of this may be cited in regard to a certain young Thoroughbred stallion that behaved very nicely during breeding when facing in the direction in which he was first taught to breed. If turned in the opposite direction he was much more unruly. This, however, might be attributed to the fact that when facing in the latter direction he was able to see other horses in a nearby paddock.

ARTIFICIAL INSEMINATION

Artificial insemination or impregnation has been practiced for a long time. The object of its first use was that several mares might be impregnated from one service and thus save the stallion. By this procedure it was possible for mares to conceive that had never been served by the stallion. The breeder regards artificial insemination today as an extra assurance that his mares will get in foal. Today, when artificial insemination is spoken of, it refers in the larger percentage of cases to impregnating the mare just after she has been bred.

In practicing artificial insemination no definite method or technic is used. It will vary in most cases, depending principally upon the person doing the work. There are different kinds of impregnating syringes used, but the breeding-bag and the gelatin breeding-capsule are preferred by a large percentage of breeders. This latter method is the one that will be described.

All materials and equipment should be as clean as possible and used only for this one purpose. The necessary equipment consists of a clean porcelain pail filled with warm water; a porcelain cup; a two-ounce glass graduate, or similar container of approximately the same size; number ten colorless gelatin capsules (these work equally as well as the pointed breeding-capsules), an elbow-length rubber glove, sterile gauze and clean towels.

Sterilized hospital gauze or common sterilized gauze bandage works very satisfactorily for straining or filtering the semen. A double layer, three or four inches square, is sufficient for this process. The glass graduate is kept in warm water while the semen is being collected. It is also advisable to fill the cup with warm water and empty it just before the semen is caught. The semen should be kept at as constant a temperature as possible during the entire operation.

The veterinarian performing this work stands a few feet away from the mare and stallion in order that he may watch for sexual orgasm to occur. The most consistent and uniform symptom of orgasm is the characteristic "flagging" of the stallion's tail, which consists of raising and lowering it several times in just a few seconds. The tail goes up more slowly than it comes down. It goes up rather smoothly and comes down with a sudden jerk. The type of respiration is also usually changed during orgasm and the nostrils greatly distended.

Soon after orgasm occurs, the penis is grasped with the right hand, when working from the left side, and the cup is held with the left hand, just as close to the ventral commissure of the vulva as possible. As soon as the penis may be "broken," it is withdrawn and the glans penis held directly over the cup. The cup is held as described because many times a large amount of semen flows from the vagina as the penis comes out. To catch semen from this source you must work quickly, as the stallion dismounts nearly as soon as his penis is withdrawn from the vagina. As he dismounts the cup is carried down with him and held directly under the glans penis in order to catch as much semen as possible, as a small amount usually comes from the urethra even after he has dismounted. The semen is now filtered through the dry gauze into the graduate which has just been taken from the warm water. Next it is poured into the capsule. The amount of semen collected in this manner may vary from a few cubic centimeters to forty or fifty cubic centimeters.

Usually at this stage the rubber glove is put on, and the arm, hand and capsule immersed in warm water for just an instant. This is always done in order to facilitate the passage of the arm and hand into the vagina as the dry rubber is more liable to adhere to the mucous membrane. The capsule is now held at one end by the tips of the first three fingers. The operator with his free hand spreads one labia of the vulva while an assistant spreads the other. The capsule is then inserted directly into the cervical

canal and worked forward as far as possible with the fingers. The external os is then grasped lightly and is pushed forward and pulled backward several times. This aids in working the capsule into the uterus, although many times the entire hand and capsule may be carried directly into the uterus.

The foregoing description is more or less in detail, but gives an idea of the steps used in artificially impregnating a mare by the capsule method. While in a large percentage of cases it is probably not necessary to impregnate, however, it may be justified in some instances. Some mares throw out the larger portion of the semen that is ejaculated, as the stallion dismounts. It sometimes happens that the stallion moves around and will not be in actual coitus when orgasm occurs. In these instances impregnation should be practiced.

As to the efficiency of artificial impregnation, I am of the opinion that the percentage of pregnancies may not be materially increased in normal mares. It was not used on one band of Thoroughbred brood mares that was under observation last year. In this group of mares the percentage of pregnancies was between seventy-five and eighty. This percentage may not seem as high as possible to some, but in reality it is very high when all the pathological and diseased conditions, to which the mare is subjected, are considered. It is, however, as high a percentage and even higher than is attained by many breeders who employ artificial insemination.

Artificial insemination has been practiced for a long time and it is, no doubt, here to stay, as it is very popular with the Thoroughbred breeders. It can be easily seen that strictly hygienic precautions are necessary, if done effectively, and as much care should be taken as with any surgical operation.

MAYBE A BOVINE SPECIALIST

Dr. R. E. Smith and family are moving to Lafayette, where Mr. Smith will make his headquarters as government bovine veterinarian.

Rensselaer (Ind.) *Democrat*

BRANCHING OUT

Dr. T. D. VanKirk, veterinarian, is now constructing a tourist camp to the left of the Dixie Highway, at the foot of Cumberland Mountain, in East End.

Middlesborough (Ky.) *News*

MENINGOENCEPHALOMYELITIS OF SWINE

By L. P. DOYLE, *Lafayette, Indiana*

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Meningoencephalomyelitis is recognized as the essential pathologic feature of Borna disease of the horse and of louping ill of sheep. A disease which has a similar pathology has been observed in swine with sufficient frequency to suggest that it is much more important than has been recognized. During the past year, meningoencephalomyelitis has been diagnosed nine different times in pigs which were brought or sent to the laboratory for examination. Other cases have been brought to our attention in which the clinical manifestations were strongly suggestive of this same disease. However, there was not an opportunity to make a careful examination of the central nervous system of affected animals.

The observed instances of the disease were in swine from three weeks to five months of age. The heaviest loss occurred on a farm where 19 of 29 pigs in four litters died when three to five weeks of age. The symptoms shown by the affected pigs in this case and the results of laboratory examination indicated that meningoencephalomyelitis was responsible for the deaths. In another instance, 11 of 90 suckling pigs died during a period of two weeks, after showing typical symptoms. Three of the affected pigs from this outbreak were examined in the laboratory and found to have typical microscopic lesions in the central nervous system. In the other instances the losses varied from three pigs in a litter of six to 3 to 5 per cent of larger groups of pigs. The course of the disease apparently varied from a few hours to several days. The instances in which the disease apparently ran a very rapid course were cases in which the owners reported that pigs died in a short time after "having fits," or were found dead in the pasture. Microscopic examination of material from three cases, in which the pigs died soon after the onset of the disease, showed the characteristic changes in the brain, cord and meninges which will be described later.

The symptoms shown by individual pigs varied quite widely, but they were usually of such a nature as to suggest an affection

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of the brain, cord and meninges. Some of the animals showed convulsions as the predominant symptom, but usually there were other well-marked symptoms, such as grinding the teeth and salivation; pushing against objects and moving in circles; muscular twitching, especially of the face and snout; and stupor and paralysis. In two outbreaks, a large proportion of the affected pigs showed rather generalized muscular twitchings and would execute peculiar jumping movements, particularly when

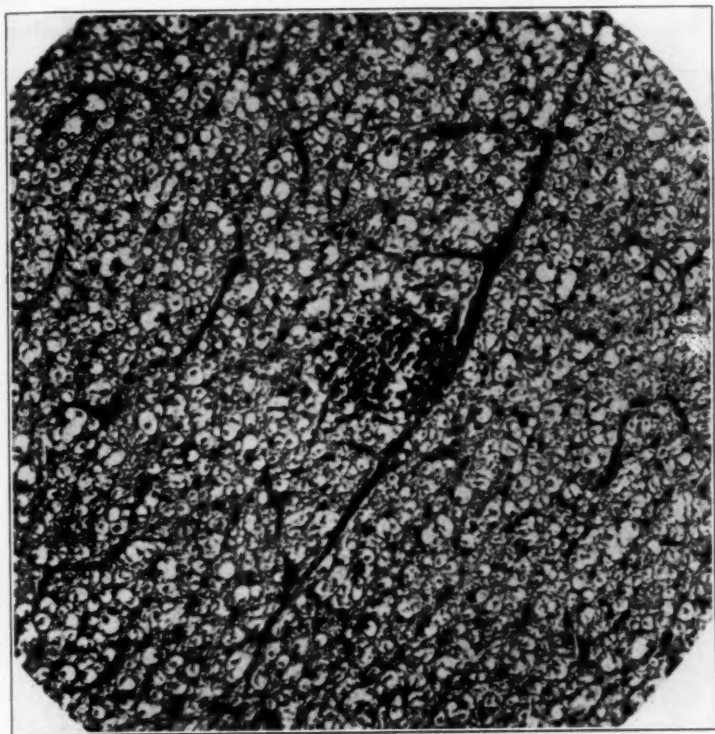


FIG. 1. A cross section of the spinal cord, showing a focus of round cells in the white matter.

they were suddenly stimulated by a sharp noise or by tactile stimulus. A well-marked conjunctivitis was occasionally seen. Nystagmus was observed in a few affected pigs. In one outbreak, several of the affected pigs were seen to vomit.

GROSS PATHOLOGY

Aside from the evidence of conjunctivitis, which was quite conspicuous in some of the affected pigs, there was usually no recognizable gross change in any of the mucous membranes of the

head. In some cases, the pia mater and arachnoid of the brain and cord showed definite clouding and thickening. The brain occasionally showed recognizable softening and yellowish-gray areas, particularly in the cerebrum and the brain stem. With the exception of a polyarthritis in one pig, no additional gross lesions were found in any other organ.

MICROSCOPIC PATHOLOGY

Microscopic examination of the brain and spinal cord showed a well-marked leptomeningitis, encephalitis and myelitis, charac-



FIG. 2. A section of cerebral meninges, showing marked perivascular and diffuse cellular infiltration.

terized mainly by the presence of round-cell infiltration. The infiltrating cells showed a diffuse, as well as a perivascular, distribution in the meninges; while, in the substance of the brain and cord, they showed a predominantly perivascular arrangement. In some of the brains which were examined, more or less round-cell infiltration was found in the cerebrum, cerebellum, and brain

stem. In other instances the infiltration appeared to be limited to the brain stem. Frequently there were found massive perivascular accumulations of round cells with concomitant degenerated areas in the brain, containing many macrophagocytes.

In the spinal cord, infiltrated areas were found in both the gray and the white matter, with a preponderance of change in the gray matter. Small degenerated areas, containing macrophages, also were found in the spinal cord, particularly in the gray

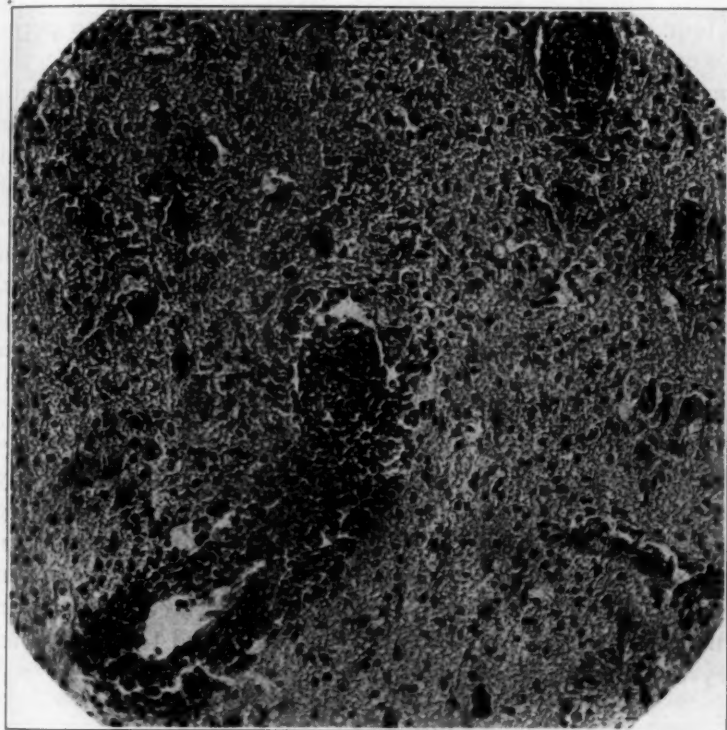


FIG. 3. A section of brain, showing perivascular accumulations of round cells.

matter. Small hemorrhages were fairly common in the brain and cord. Microscopic examination of sections of eyelids from some of the pigs which had conjunctivitis showed well-marked perivascular accumulations of round cells in the conjunctiva and tarsus.

DISCUSSION

The significance of meningoencephalomyelitis in swine is, of course, not fully apparent from this study. The sporadic

nature of the disease and its histopathology are similar to those of well-defined infectious diseases of other animals. The rare occurrence of lesions outside of the central nervous system indicates that the affection of the nervous system is primary and not secondary to other conditions, such as rhinitis and otitis.

Attempts were made to grow microorganisms from the central nervous system of pigs from four of the nine outbreaks studied. Apparently pure cultures of a lanceolate streptococcus, morphologically similar to pneumococcus, were obtained from three of the four attempts. The organism grew very sparsely on pork-infusion agar seeded directly with material from the affected animals, but failed to grow when attempts were made at subculturing on the same medium. A similar microorganism has been encountered by others while studying cerebro-spinal meningitis in live stock. Wilson and Brimhall¹ encountered Frankel's pneumococcus in outbreaks of cerebro-spinal meningitis in cattle, horses, sheep and hogs. These two authors also presented the results of inoculation experiments with horses, indicating that the organism isolated was capable of producing meningitis. Trambusti¹ encountered a similar organism in the meningeal exudate of a goat. Zangheri found it in a horse; and M. d'Ercole found it in two calves.

A very interesting feature of myelitis is that it evidently accounts for some of the posterior paralysis in swine. Recently a microscopic examination was made of the spinal cord of a pig which had shown posterior paralysis, but no other symptoms. Small perivascular accumulations of round cells were found in the white matter. The foci of round cells appeared to be few in number, as several cross sections of the cord failed to show them. They were found, however, in longitudinal sections.

SUMMARY

A well-marked inflammation of the cerebral and spinal meninges, the encephalon and the spinal cord of pigs was observed in nine instances in which affected animals showed marked nervous symptoms. In one outbreak there was a death loss of about 65 per cent. The essential histopathologic change was a round-cell, mainly perivascular, infiltration of the central nervous system. A pig which had not shown any symptoms except posterior paralysis was found to have similar infiltrations in the white matter of the spinal cord.

REFERENCE

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THE VETERINARIAN AND HIS RELATION TO THE PUBLIC WELFARE*

By C. P. FITCH

University Farm, St. Paul, Minn.

Our country has undertaken many great experiments. Not so many years ago, our popular form of government was considered by the people of the Old World as a gigantic trial, a sort of experiment from which they could see but one result—failure. Time has shown that they were wrong. The stability of the representative government of the United States is beyond question. It is as firmly grounded as the Gibraltar.

Nothing in the world's history is comparable with the gigantic experiment which is now going on here in America in higher education. A college degree is now demanded by the American youth as his birthright. President Chase, of the University of North Carolina, states that in 1925-26, the last report available, there were 975 universities, colleges, and professional schools. During that year there were 62,224 faculty members giving instruction to 822,895 students. The valuation of the physical plants utilized for this instruction amounted to \$2,334,307,000. The income of these institutions from endowment and taxation amounted to \$479,774,000 for that year. We believe that this year there will be graduated, from our higher institutions of learning, approximately 150,000 students.

We belong to this group, as students, faculty, or administrators. It is a group which is making itself felt in the everyday life of the community. It is very easy to see that as this process goes on for a few generations that its effect will be profound on our social structure. The greatest seer cannot foresee the final results.

Of these 150,000 graduates, scarcely 150, less than 0.1 per cent, will be veterinarians.

Veterinary education began in France, in 1762, for the purpose of training men to save, as far as possible, horses injured in battle. In America the first veterinary school was a private institution, organized in 1857. Several other institutions of like character sprung up in various cities. Later, the land grant colleges, sensing the necessity of a trained body of men to look

*Address delivered at the Commencement exercises, Iowa State College, June 10, 1929.

after the health of our animal husbandry, established schools for the training of veterinarians.

The Veterinary Department at Iowa State College was one of the first to be fostered by our colleges and universities. At present all of the private veterinary schools have disappeared and the veterinary profession has qualified educationally for its many and important responsibilities.

Veterinarians function today as a factor of economy and safety to the nation in three distinct, though overlapping fields: (1) Administering to the sick and injured animals and instructing their owners in their proper care, (2) protecting the public against the diseases of animals which are communicable to man, and (3) protecting our animal husbandry, our billion-dollar industry, against losses from infectious and parasitic diseases.

Few realize how closely connected with our daily life and welfare are the duties of this significantly small group of veterinary graduates. It will suffice to discuss only one of the ways by which veterinarians have contributed to human progress.

LIFE'S EXPECTANCY DOUBLED

We live in a mechanical and electrical age—an age of scientific study, experimentation and discovery. All medical sciences have shared in the advance and application of new knowledge. One of the results has been to increase the span of human existence. The average length of human life as late as the Sixteenth Century was between eighteen and twenty years. Now, in this Twentieth Century, we have a right to expect to live on this earth for at least fifty years. Life's expectancy has been more than doubled. Science has added about thirty years to earthly existence. No single cause will account for this great increase in the span of life. The most important cause is undoubtedly the reduction in infant mortality. The next in importance is our conquest of the infectious diseases, particularly tuberculosis, malaria and yellow fever. It is in this field that veterinarians have rendered great service to mankind.

May I be permitted to digress for a moment to point out what, to me, is a very interesting fact. You young people of our schools and colleges may expect to live nearly twice as long as those of the same age of a few centuries ago. What, however, of the expectancy of those of my age, forty-four? Little, if any change has occurred. The life span of those who reach forty-five remains approximately the same as it did in the days of the mummies and

the Egyptian kings. Science has failed to conquer the diseases which cause the greatest mortality in this group, cancer, heart disease, conditions resulting from high blood-pressure, and pneumonia, are the principal causes of death of the individual over forty-five. Science has not yet found how to control these diseases successfully and increase the duration of life of our so-called "middle-age" group.

The veterinarian has rendered great service to humanity in its efforts to stem the ravages of the great white plague—tuberculosis. It is proven that bovine tuberculosis is transmissible to man and is especially dangerous for children. The principle source of infection is milk from tuberculous cows. Since 1892, the campaign to control this disease of animals has steadily progressed in the United States. In England where the number of tuberculous cattle is high, it is responsible for six per cent of the total deaths from tuberculosis, which amounts to a mortality of over three thousand annually. In 1917, the federal government combined with the various states in a united effort to wipe out this infection of animals. Today the results of this campaign are far-reaching. Over seventeen million cattle have been tested and found free of the disease. Nearly seven hundred counties have the percentage of tuberculous cattle reduced to less than one-half of one per cent. Most of our progressive municipalities have milk ordinances which ensure a wholesome and safe milk for its residents. Our children are being freed of the menace of tuberculous bones and glands, and scrofula is becoming a disease of the past.

PROTOZOAN DISEASES CARRIED BY INSECTS

Some of our most serious infections are due to protozoa, microscopic animals which in many instances are transferred to their human host by insects. Malarial fever is an example of this group. Some authorities have claimed that malaria is the most important of human diseases, for although it is not a very fatal infection, it is constantly present in practically all tropical regions and in many temperate climates. At any one time, there are more people suffering from malaria than from any other single disease. In India alone it has been estimated that it causes an average annual death-rate of five per thousand which means that over a million persons die of malaria each year in India. Ross demonstrated in 1895 that the mosquito is the carrier of the malarial parasite and from the wonderful work of Walter Reed

and his companions, in 1900, a single species of mosquito is known to be responsible for carrying yellow fever.

These discoveries place in our hands the weapons of defense which have rendered many districts, previously badly infected, now nearly free of these insect-borne infections. They aided in the building of the Panama Canal, due to the efforts of General Gorgas in making the Canal Zone habitable.

An important aid to these discoveries was furnished in 1890 by Smith, Kilbourn and V. A. Moore, veterinarians. They were studying a disease of cattle which we are accustomed to call tick fever. They showed that it was carried by a single species of tick and, in the absence of this tick, the disease was not transmitted. This example of insect-borne disease has been a "lead." which has, through further study, given us the solution of many of our perplexing disease problems.

GUARDIANS OF OUR FOOD SUPPLY

Every day, in our homes, we find the assistance which veterinarians are lending to maintain the public health. About two-thirds of the meat consumed in this country is prepared under the supervision of the federal meat inspection service. The watchful eyes of 2,500 employes, of whom nearly two-thirds are veterinarians, examine all animals on the day they are slaughtered and, during the dressing of carcasses, examine every part. In 1924 reports show that over a million carcasses, or parts thereof, were condemned by these inspectors. To put it differently, "there were 69 freight trains of 50 cars each of cattle, and 23 trains of 50 cars each of hogs, sent to market for human food, that were converted, because of disease, into fertilizer. Imagine for yourselves what might have happened in our families and those of our friends, if this vast amount of meat from condemned animals had not been detected and removed by veterinary inspectors."

To the graduating class may I say a word. In the Good Book which we all revere there is a part of a verse which reads, "And your young men shall see visions." Your undergraduate work is finished. You have glanced into the book of knowledge. Success depends on your vision of the future. Is it clear? Have you engendered the ideal which will lead you on the straight and narrow way to productive scholarship. Your Alma Mater has done her part to open your eyes to the visions of the future. All that remains is for you to move onward, keeping clearly in mind that this is "Commencement" and that your student days have just begun.

SHIP INSPECTION A FACTOR IN ANIMAL DISEASE CONTROL*

By H. P. BONNIKSON, *Sacramento, Calif.*

Division of Animal Industry, California Department of Agriculture

California, with 1000 miles of seacoast, has many important harbors. Its shipping is extensive and vessels arrive from practically every port of the globe. Many of the ships receive their meat supplies in countries where foreign live stock diseases exist. This creates a constant danger of some outside infection gaining entrance to our shores, through the medium of ships' garbage containing infected meat scraps, later used for feeding hogs.

With the occurrence of the 1929 outbreak of foot-and-mouth disease, the cause of which has been attributed to feeding infected ships' garbage to hogs, there appeared to be a necessity for supervision over incoming ships with reference to foreign meat supplies and garbage disposal. Therefore, Director G. H. Hecke, State Department of Agriculture, issued a proclamation providing that all vessels arriving at ports of entry in California should not unload or discharge garbage except in tight receptacles for the purpose of being incinerated; otherwise the garbage must be retained on board for dumping beyond the three-mile limit. It was also proclaimed that vessels having any fresh or frozen meat in store, which did not bear inspection stamps of this country, should be retained in compartments or containers under seal of an inspector while such vessel remained in port.†

The activities of carrying out the requirements of this proclamation were undertaken immediately. Inspectors, all of whom were veterinarians on the staff of the Division of Animal Industry, were stationed at San Francisco, San Pedro, San Diego and Eureka. It was necessary at first for the inspectors to become acquainted with procedures and maritime practices at ports, obtain information regarding the arrivals and movements of ships and to learn the various places where ships dock. Attention had to be given to all incoming vessels, including those of the Navy and Army, commercial ships, and even private boats, such

*Presented at annual meeting of the California State Veterinary Medical Association, Sequoia National Park, Calif., June 10-12, 1929.

†Subsequent to the reading of this paper, the regulation, pertaining to the sealing of foreign meats in ships' stores, has been revoked, since the U. S. Bureau of Animal Industry advises that authority in this matter apparently rests with the Navy, Treasury and War Departments and the United States Shipping Board. However, the requirement relating to the disposal of garbage from ships will be continued.

as yachts and fishing-boats, the latter especially at San Diego. In order that all vessels arriving at San Francisco Bay might be adequately inspected, it was necessary for the inspectors to board boats not only at San Francisco, Oakland and Alameda, but at upper bay ports as well, extending even above Martinez. At San Pedro harbor the area to be covered was also very extensive. This discussion pertains principally to San Francisco Bay; however, as can be easily understood, this activity with its many ramifications is practically parallel at all of the ports.

A BIG UNDERTAKING

The extent of this undertaking can be appreciated when it is realized that each month nearly 800 vessels have been inspected, the meat supplies of the various boats examined and refrigeration rooms sealed on those having foreign meats, instructions issued and proper action taken in all cases with reference to the disposal of garbage. It was found that many incoming vessels, staying only a short time in port, were in the habit of throwing their garbage overboard and those remaining in port for a considerable period of time generally had their garbage collected by trucks from hog ranches. It was necessary to get the steamship companies or agencies to provide containers for vessels in order that garbage could be retained for dumping at sea. Inspections revealed that a large number of incoming boats were supplied with meat from countries where foot-and-mouth disease is known to exist, and therefore, without proper supervision, the danger of the spread of this infection from meat scraps in garbage was obvious. It might be appropriate to state that insofar as the meat is concerned, this activity pertains only to ship stores or meat used by the boats. It does not apply to meat offered for importation or animal products such as hides, hair, and glue stock, since these are regulated and supervised by the United States Bureau of Animal Industry.

ARMY AND NAVY VESSELS

It was found at Fort Mason and Mare Island that garbage from army and navy vessels was being sold under contract to hog-feeders. This was a source of danger, since many of these vessels touch various foreign ports, especially in the Orient, and inasmuch as their voyages often extend over long periods of time, it is sometimes necessary to take on foreign supplies. The army and navy officials at these two government stations extended full cooperation and the garbage disposal contracts were canceled.

Fort Mason arranged to haul its garbage to the Presidio incinerator, while Mare Island decided to dispose of ships' garbage by treating with lime and burying in trenches.

A number of naval vessels are also usually anchored in the bay. Garbage from these boats had previously been collected and sorted in order to salvage that suitable for hog feed. At the suggestion of Dr. H. H. Hicks, U. S. Bureau of Animal Industry, an order was issued by Dr. William C. Hassler, Health Officer, San Francisco, forbidding the sorting of this garbage and requiring that it should be disposed of by incineration.

The sealing of foreign meat presented more difficulties than the control of garbage disposal. It was often difficult to read the meat stamps because the meat is usually frozen and frequently closely packed in the coolers, making it difficult of inspection. Much meat is often piled on the floor and after a vessel has passed through a storm, it is not uncommon to find no meat left hanging on the hooks. Frequently meat is found bearing no inspection stamps and therefore giving no indication as to its origin.

FOREIGN MEAT-STAMPS

It was interesting to notice the great variety of meat-stamps used by various countries. An interesting method of meat-stamping was observed where three dotted lines connect all of the stamps on each piece of meat. The lines were of separate colors, green, blue and red. Such stamps were noticed on bacon from New Zealand and beef from Singapore. A number of countries have stamps which the inspectors soon learn to recognize readily. Canadian stamps are worded, "Inspected and approved." Argentine and Uruguay stamps are a half-circle in shape; those of Australia are round and always made with bright red ink. Japanese and Chinese stamps are usually large oval or rectangular in shape and often, besides their own characters, have the name of the place of inspection in English letters. Rotterdam, Antwerp, Hamburg, Glasgow and other European stamps have been observed. New Zealand beef in lieu of stamps is identified with tags attached. This work would be considerably facilitated if each country respectively would adopt and use characteristic stamps.

The sealing of foreign meat stores frequently caused certain inconveniences to boats, since the refrigeration rooms also contained smoked and cured meats, fish, butter, milk and vegetables. Before a cooler can be sealed it is usually desired to take out some

of these foodstuffs for use while in port, which of course is permitted. This, however, requires considerable time. Again, inspectors are often requested to return to release the seal in order that new provisions can be added. This also requires much time and usually necessitates a number of trips as the various commodities are delivered. This cooperation is much appreciated by those in charge of boats and tends to result in greater harmony in the work. In the beginning all foreign meat was placed under seal; later, however, coolers were left unsealed on vessels containing only meat known to be from certain countries, such as Canada, Australia and New Zealand, which are free from foot-and-mouth disease. The control of all garbage from these vessels was nevertheless continued.

INSPECTION PURPOSE EXPLAINED

The inspection of boats entering our ports is carried on solely for protective purposes and consequently considerable care has to be exercised in order that no one will wrongly construe it as discriminatory. Quarantines must be carefully and justly applied; otherwise it might have a bearing on the friendly relations we enjoy with other countries. The inspectors must constantly explain the purpose of the work and that when an infection such as foot-and-mouth disease is brought in, it is not only difficult and expensive to eradicate, but also brings about embargoes and restrictions by other governments on shipments of many agricultural products from this state. They must explain that the movement of commodities thus curtailed, has a direct bearing on the shipping business. Also that the requirements are not imposed to discriminate against the use of meat obtained from any particular country and should not cause undue hardship, since they apply only while in port, at which time fish and cured meats can be used.

COOPERATION IS GOOD

When this is understood, little objection is raised and in most instances cooperation results. Likewise, it is not difficult to get the cooperation of ship-owners with reference to garbage disposal, even though it usually entails carrying the galley waste to one end of the boat and keeping it in containers until the boat is again out at sea. In some cases, quite a number of large garbage-cans are required. Some vessels have followed the practice of adding ashes or creosote to the garbage, in order that it might not become objectionable while being retained.

It is stated by ships' officers that this coast is one of the few places where it is customary to collect ships' garbage for hog-feeding. This is said to be on account of cold weather existing for parts of the year in many other places, making the handling of this material difficult.

Inspection work at the ports has led to the observation that a large number of vessels are supplied with meats of South American origin. This is of importance, as far as our live stock industry is concerned, on account of the prevalence of foot-and-mouth disease on that continent. It is reported that South American meats are extensively transported to many European countries. Consequently many foreign vessels touching at London, Hamburg, Rotterdam and other places often are supplied with meat from this source even though they do not touch at ports in South America.

ARGENTINE MEATS WIDELY SOLD

Of special interest is the information that large quantities of Argentine meats are shipped to the United States Commissary and the Panama Company at the Canal Zone for sale to ships as well as to the local population. Consequently ships passing through the Panama Canal or touching those ports have opportunity to obtain meat of Argentine origin. It was found that a considerable number of coastwise vessels also had in supply Argentine meat obtained in Balboa. Australian and New Zealand meats also are distributed at the Canal Zone. This is of considerable importance since it reveals that the home port of a ship does not necessarily give reliable information regarding the origin of a ship's meat supply.

PRINCIPAL MEAT ORIGINS

It was noticed that different kinds of meat found in ships' stores came from different parts of the world; for example, most of the beef originates in Argentina, Australia, Canada, New Zealand and the United States. Mutton is usually from Australia, New Zealand and the United States, while most of the pork used by ships is obtained in this country. Much of the foreign meat appears to be of very good quality and, according to information, is purchased for considerably less than meat obtained in this country. Vessels from the Orient sometimes have certain meat of Chinese origin in store, which usually is lean and of dark reddish color.

LIVE ANIMALS FOR MEAT

A few boats retain the old custom of carrying live animals, for slaughter at sea, as fresh meat is needed. This practice is of importance on account of the possibility of ships taking on animals from countries having foreign communicable diseases. According to federal regulations animals from such countries must be slaughtered before vessels are allowed to enter out ports. The live animals most frequently seen are cattle, sheep, goats and hogs, and are usually carried by European vessels.

INTERESTING CONDITIONS OBSERVED

Inspectors encounter many interesting conditions. In the meat-box of a certain Oriental boat were about a dozen dressed cats, frozen and apparently in supply for food purposes. The carcasses were eviscerated, with hides, heads and tails attached. On a few vessels having Hindu personnel, it seems on account of certain religious beliefs that if sheep are butchered on board, the heads must be retained for a certain period of time. The insantiation or lack of cleanliness seen in the cold-boxes, store-rooms and elsewhere on occasional boats, is surprising.

It is interesting to observe the number of ships in the harbor in process of discharging and reloading cargo. Almost every product and commodity in the world is carried and some of them in exceedingly large quantities. The inspectors obtain a good idea of what constitutes the commerce of the world.

The danger to the live stock industry of introduction of foreign diseases is very real and when an outbreak occurs it may be serious. It is important that this danger be prevented. Ship inspection of foreign meat stores and regulations of garbage disposal is an additional feature of live stock disease control which promises to be a valuable safeguard as its purpose becomes better understood, cooperation more complete and the service further developed.

Civil Service Examination

The United States Civil Service Commission announces an open competitive examination for junior zoologist in the Bureau of Animal Industry, Department of Agriculture, for duty in Washington, D. C., or in the field. Applications for examination must be on file with the Civil Service Commission at Washington, D. C., not later than September 24. The announcement states that the salary range is \$2,000 to \$2,500 per year.

TO THE VETERINARY PROFESSION OF FRANCE*

By L. A. MERILLAT, *Evanston, Ill.*

MR. PRESIDENT AND COLLEAGUES:

In proposing my toast, permit me to assure you that I feel myself exceedingly fortunate to find myself in Paris during the "Journées Vétérinaire d'Alfort" and to take advantage of the opportunity to bring you the felicitations of my American confrères, which I do officially, as a member of the Executive Board of our national organization—the American Veterinary Medical Association.

In this role, I am also authorized, in fact charged, to transmit to you the cordial salutations of its officers: Doctor T. E. Munce, the president; Dr. H. Preston Hoskins, the secretary; Dr. J. R. Mohler, chief of the veterinary service of the United States; Doctor Adolph Eichhorn, director of a delegation of American veterinarians who will visit you next year, on their way to the International Veterinary Congress, in London; and Professor L. Van Es, of the University of Nebraska, who is the United States member of the Permanent Committee of the approaching congress.

Notwithstanding my poor knowledge of French expression, as you observe, it is very agreeable to me to accomplish this mission.

I find myself in France not only as a tourist among the crowds which visit your country every year, but also to refresh my memory of a less agreeable visit in 1917-1919; to see a France in a condition of peace, a Paris lit up, by comparison with the dark nights of 1918 which hid the secrets of each tomorrow. Fortunately, and this is what pleases me most, I find you working actively and admirably to regain the welfare of pre-war days. In this regard I wish the most precious results for you, for your profession and for your country.

This retrospective review recalls my sojourn at Alfort, distinguished institution, the veritable cradle of veterinary science and of the veterinary profession. I could hardly forget my amiable reception by its former director, Professor Vallée, whose well-known scientific spirit is surpassed only by his personal charm; by Professor Railliet, recognized master of veterinary

*Delivered at the banquet of the Anciens Elèves d'Alfort, Restaurant Drouant, Place Gaillon, Paris, France, June 16, 1929.

parasitology; by Professor Moussu who, in America, we call the dean of bovine pathologists; nor do I forget Professor Bourdelle, impressive anatomist; nor Professors Porcher, Coco, Petit, Deschambré and the assistant professors whose names and achievements are well known in America. The possibility of circulating among them after nearly two years of unusual anxiety in a strange country was a touching change which would be hard to forget in a mere decade.

As an American veterinarian, I have little that is new to relate. The scientific world is not so large. Our campaign against bovine, porcine and avian tuberculosis, against Texas fever, against foot-and-mouth disease, when from time to time it visits our country, the constant amelioration of our meat and milk inspection service, you understand well. It is not necessary to recall them here. Moreover, in regard to clinical subjects, it is rather to you we look for information.

In regard to professional questions, it seems to me that conditions are the same throughout the world. The passing of the horse, as we say in America, has brought a formidable transformation for practitioners. Notwithstanding that the value of domestic animals has augmented in all countries, the practitioners have not yet found means of profiting thereby as they once profited when the horse dominated our studies. On the contrary, in all countries, they are menaced by all sorts of empirical practices and charlatanry which are little curtailed by official action. As I was saying to my friend Doctor Blaizot, former student of Alfort and former practitioner of Paris, it is the man who practices our profession that should be the link between the laboratories and the public; it is he who should carry the results of scientific research to the farms, because the public, the laity, cannot seize their value owing to their complexity. It is, therefore, the qualified practitioner who should be the master and the instrument of their application.

What is being done to ameliorate the welfare of these men? What is being done that they may perfect the task devolved upon them? In my eyes, gentlemen, this point is among the most important for the future of veterinary science, that is to say, for the future of our profession, that it may attract the better class of young men into the veterinary schools, that a more attractive occupation, a more certain career, and a higher standing shall be maintained for them. In fact, in working to obtain better conditions for practitioners, larger budgets could be

obtained for the veterinary schools, for their professors, and for veterinarians officially employed. Here is a question, that is probably too thoroughly drowned by our scientific aspirations, which is seriously neglected in all countries, and which doubtless merits more pretension and dignity than it has been accorded.*

I thank you most heartily for the honor you have conferred upon me in receiving me so cordially among you, and I drink to your health, to your prosperity, and to the welfare of the veterinary profession of France.

*The question of legal protection of veterinary practitioners in the different countries will be presented for discussion at the International Veterinary Congress at London next year, according to the preliminary report of the Permanent Committee which formulated the program during its meeting in Paris, June 13, 1929.

Maine Free of Bovine Tuberculosis .

The entire state of Maine has been declared by the U. S. Bureau of Animal Industry to be free of bovine tuberculosis, as far as can be determined by thorough and extensive testing.

By this recognition, which became effective May 1, 1929, Maine became the first state in New England and the second in the United States to suppress tuberculosis among its cattle. North Carolina was the first, having been declared free of the disease on October 1, 1928.

The successful outcome of Maine's eradication campaign is the culmination of approximately twelve years of systematic tuberculin testing. More than 650,000 such tests have been applied to cattle, of which about 1 per cent reacted and were removed for slaughter.

Veterinary officials of the Bureau of Animal Industry point out that the clean-up of bovine tuberculosis in Maine has an important bearing on the campaign for eradicating the disease in the other New England states. Aside from being a producer of dairy products, Maine has for interstate sale many surplus dairy cattle. These cattle are not only acceptable but are sought by the owners in the less fortunate New England states where the breeding of cattle is not an industry and in which the percentage of infection is higher than it was found to be in Maine.

The eradication of bovine tuberculosis in Maine was greatly hastened by favorable legislation enacted in 1925, giving State officials authority to take up extensive area work.

CLINICAL AND CASE REPORTS

(Practitioners and others are invited to contribute to this department reports of unusual and interesting cases which may be helpful to others in the profession.)

ABNORMAL FETAL GROWTH

By J. F. SHIGLEY, *State College, Pa.*

The accompanying picture shows an abnormal fetal development. A grade Guernsey cow gave birth to a vigorous healthy calf. When the placenta came away, about six hours later, it was found to have the growth shown.

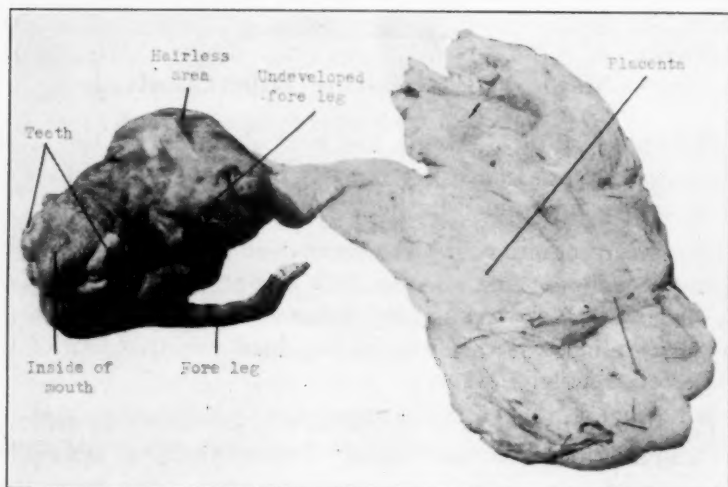


FIG. 1. Malformed calf.

The mouth is shown to be inside out, with the rows of teeth breaking through. Hair covered the body to a point a few inches back of the fore legs. One fore leg was fully developed and the other was developed as far as the mid-section of the humerus. Viscera were present in the sac attached to the hairless thoracic portion of the body.

EXPERIMENT WITH MIXED ENTERITIS BACTERIN IN DOGS

By CLARENCE E. BLEY, *Augusta, Ga.*

An organism similar to the *Bacillus enteritidis* was isolated from two fatal cases black tongue (fecal culture) by a local labora-

tory. To find its effect, fifty dogs were injected with a bacterin* composed of *B. enteritidis*, *Bact. suisepiticum*, *B. paratyphosus* and *B. coli*. Increasing doses of $\frac{3}{4}$, 1 and 2 cc were injected subcutaneously each week for three to five weeks. Five dogs with black tongue were injected daily, of which four died. The one which recovered was a young dog that had come from a yard in which there had been a fatal case of black tongue two months previously. A vaccinated pointer in this yard remained well.

Fatal black tongue developed in a dog four days after one injection. The other dog in this yard had just died of black tongue. An aged female Airedale, which had had black tongue, developed fatal black tongue ten days after one injection. In two other bird dogs, which had had black tongue, severe reactions resulted from the injections. These reactions resembled symptoms of mild black tongue, i. e., ulcers on the mucous membrane of the mouth, three to five degrees elevation of temperature, anorexia and slight hemorrhagic diarrhea.

One of these dogs was reported dead of black tongue, two months after the completion of the vaccination. The other dog received five injections and developed non-fatal black tongue six months later. A non-vaccinated setter in this yard had black tongue twice in this time, and a vaccinated fox terrier in the same yard remained healthy.

All the other dogs had practically no reactions from the bacterin and remained free of black tongue. The experiment showed that dogs recovered from black tongue react differently than other dogs to mixed enteritis bacterin.

*Enteritis Mixed Bacterin (Swine) was the product used. Hog cholera was prevalent in the district and many cases of black tongue developed in dogs which had eaten some of the dead hogs.

CHOKE IN A HORSE

By EARLE L. KITTRELL, Augusta, Ark.

The subject was a bay gelding. He could not eat and there was a discharge from the nose, with all the symptoms of choke. I gave $\frac{1}{2}$ grain each of arecolin, pilocarpin and strychnin, and then waited 30 to 40 minutes. I had him jumped over a pole about 30 inches high, but without results. I passed a stomach-tube as far as the obstruction and pumped in water slowly. Some oats and small pieces of corn cob were returned and then the passage was open. The horse showed distressed breathing for a few minutes and then seemed to be all right. I left and

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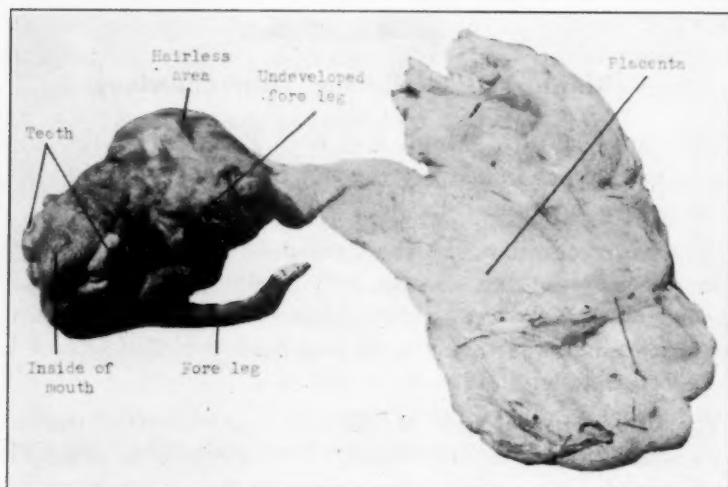


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gave the owner orders to put the horse on pasture for three or four hours. The owner did this, but the horse died in about half an hour after he had started to eat. I thought it best not to hold an autopsy, as I suspected that the horse had been suffering from choke at least 36 hours or possibly longer, and I felt sure that I would find the ingesta in the thoracic cavity and I would get the blame.

MELANOSIS

By J. F. SHIGLEY, State College, Pa.

This case, showing melanotic tumors, is that of an aged mare. In addition to her share of farm work, she has raised twelve colts.

The tumors had caused a marked displacement of the anus and vulva. Defecation was difficult except when feces were soft



FIG. 1. Melanosis.

in consistency. The region of the mane was apparently not affected, but numerous small tumors were present in the skin of the sides and hips.

REUNION OF THE TENDON OF ACHILLES IN THE DOG*

By R. G. CUTHBERT, *Vancouver, British Columbia*

In the September, 1928, issue of the *North American Veterinarian* an article appears which states in part as follows:

In small animals, the accident (i. e., complete solution of the tendo-Achilles) while less grave than in large animals is always pronounced troublesome to treat and is apt to result in permanent deformation of the injured leg, because of the powerful contractions which keep the ends of the severed tendons too wide apart to be filled in with formative elements. As the literature is silent in regard to approximating the ends by means of sutures, the report of two cases in dogs in which suturing was practiced is of interest.

The article then describes the cases briefly. It was chiefly through this article that I got my inspiration for this paper and what little we find in current literature is so devoid of important detail, I trust you will not be too bored if I attempt to describe two cases of my own at some length.

The first was a Boston terrier female, aged seven months. She was presented to me about three weeks after she had met with an accident in which a large cut was occasioned on one hind leg. The owner had no idea how it had happened but washed the wound and attended to it at home until it had healed. It was not until the dog was considered a cripple that it was brought in for examination.

It walked on three legs and tried to use the fourth, but every time the unsound leg was used the heel touched the floor. On examination it was found that a diagonal scar appeared about a half-inch from the os calcis and when the region of the tendo-Achilles was manipulated between thumb and finger, a distinct gap could be felt in the course of the tendon. This gap was filled with a soft structure which, when traced in either direction, terminated in an abrupt thickening.

Diagnosis was severed tendo-Achilles, brought about by some sharp object. After discussing ways and means it was finally decided to have her operated upon, the prognosis being guarded.

OPERATION

The patient was given a half-grain of morphin sulphate hypodermically and the offending member shaved and wrapped in absorbent cotton soaked in a 1:1000 bichlorid of mercury solution and bandaged.

*Presented before the Pacific Northwest Veterinary Medical Association, Vancouver, B. C., July 15-17, 1929.

The following instruments were sterilized by boiling for one-half hour: scalpel, scissors, sharp tenaculum, 2 pair artery forceps, 2 half-round needles, needle forceps, silk-worm suture and pack towel. Absorbent cotton swabs also were boiled and placed in a 1:2000 bichlorid solution.

The patient was anesthetized, to relax the muscles fully, and placed in sternal recumbency with the injured leg drawn backward and supported by a thick pad about four inches high. The packing was removed and the site of operation, which was judged by the existing scar, was surrounded with sterile towels.

A longitudinal incision about an inch and a quarter long was made through the skin with the scalpel. Very little fascia was encountered before reaching the false portion of the tendon, which was somewhat redder than the true tendon and softer. By blunt dissection the false tendon was separated and lifted up. It was followed in both directions until the union with the true tendon was reached and here cut across at right angles. The stumps of the true tendon were then drawn together by an assistant and sutured with 20-day chromic cat-gut. Two sutures were placed about one-eighth inch from the severed ends and one between these about three-eighths inch from the severed ends.

Tincture of iodine was dropped into the wound and the skin approximated by five interrupted sutures of silk-worm gut. The site was again painted with tincture of iodine, dry boracic acid dusted on and a light bandage with absorbent cotton applied around it.

The leg was then encased in a plaster of Paris cast, extending around the loins, and a window left for observation and dressing. The wound was not disturbed until the second day following the operation, when the dressing was removed. It looked dry and clean, so was redressed. It was observed daily and the stitches removed from the seventh to the tenth day, when the patient went home.

The cast was ordered left on for two weeks longer but the patient was given too much freedom and in ten days was returned with the cast broken at the place where the window was left. It was thought that our work was all in vain but when the remaining part of the cast was removed the dog was seen to put a little weight on the leg although she still favored it greatly. She was again dismissed with instructions to keep her from doing any jumping whatsoever. She soon regained full use of her leg and is now quite sound.

CASE TWO

The second case was that of an Airedale (male) which had come off second best in an altercation with one of his playmates. It would seem that he was even retreating with grace and dignity when his assailant attacked from the rear and hamstrung him. At any rate he was presented with a lacerated wound above the hock and the injured leg could not support his weight but the heel touched the floor when any attempt was made to use it.

It was considered unwise to attempt to unite the tendon immediately, so the wound was irrigated daily with a warm Dakin solution for four days and then with normal saline until granulation and healing were complete. It is believed that a portion of the tendon sloughed away during healing.

The patient was then prepared as in the previous case and operated upon in a similar manner but there was more reorganized tissue to contend with and the false tendon was not so distinct. There was merely a vestige of the distal stump attached to the os calcis, yet sufficient to get the sutures, of which there were four, to hold. By approximating the ends it was found that the leg would be carried quite far back, so a space about one-sixteenth of an inch was left between the ends. The skin was sutured, dressing applied and cast with window provided.

On the third day the lowest stitch was removed and a healthy-looking serum released. The dressing was reapplied and changed daily for ten days, when all of the stitches were removed. In this case the cast was reinforced at the window before the patient was discharged. Orders were to keep him quiet for three weeks longer and bring him back to have the cast removed.

When returned, the cast was still wearing well but had chafed in some places. The leg appeared to have healed although he would not use it and it was carried too far back. As I lost track of him after that, I cannot state the ultimate result of this operation.

RENAL COCCIDIOSIS OF GEESE

By S. H. McNUTT, Ames, Iowa

Department of Veterinary Investigation, Iowa State College

Renal coccidiosis is an apparently rare but highly fatal disease of geese. A casual search of the literature shows but few reports of this condition from Europe and none from this country. Apparently there is some limiting factor in its spread for, although

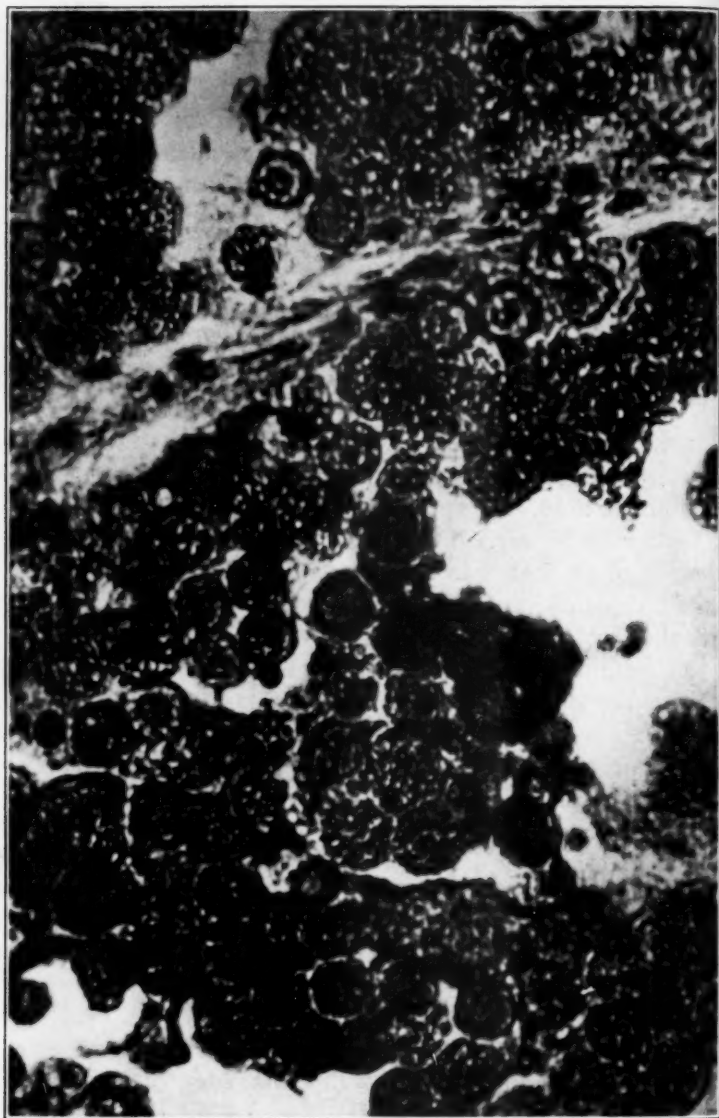


FIG. 1. Renal coccidiosis. Showing coccidia in two uriniferous tubules. Nearly all the formed bodies are coccidia.

it has been known for nearly forty years, it has never become prevalent. Renal coccidiosis of geese was first described by Railliet and Lucet,¹ in 1890, in France. They named the causative organism *Eimeria truncata*. Oocysts resembled *E. stiedae* but were smaller. Spiegl,² in 1921, described an outbreak in Germany. The disease was highly fatal. Affected geese lived about 24 hours. The kidneys were greatly enlarged and the tubules contained great numbers of coccidia. No coccidia were present in the intestine. Oocysts were nearly spherical (15 to 20 x 13 to 15 μ), with a well-marked micropyle at one pole. The author was unable to produce sporulation of the oocysts. Lerch,³ in 1923, described a second outbreak of the disease in Germany. Eighty to 100 per cent of the young geese were affected, with no recoveries. A good description of the gross lesions is given by this author. Coccidia were found in the intestines at 4 to 6 weeks of age. Renal coccidiosis occurred later, at two months or more. Nothing was found morphologically to differentiate the organism from coccidia that infect other fowls.

In the spring of 1926, a party living in the northern part of Iowa hatched 100 goslings, from eggs all coming from three females. All died but thirteen, which were sent to market in November. The three old females were retained and in the spring of 1927 were placed on clean ground and good pasture. Ninety goslings were hatched with a 17 per cent loss. The old geese appeared to be immune. Losses occurred in young geese at the age of from three weeks to three months; the younger the gosling the more rapidly fatal the disease. There were no recoveries. The first symptoms noted were usually some looseness of the bowels with whitish discoloration of the feces. Affected goslings kept up with the flock in this condition for several days. Even when very weak, an affected gosling would attempt to keep up with the flock, resting every two or three feet, until at last it would give up, its eyes sunken and dull, its wings hanging, its beak moving in an attempt to call but unable to make a sound. At this stage the emaciation was extreme. Only feathers and bones could be felt when the fowls were handled. They lingered from one to three days, eating as long as they had strength. The symptoms found corresponded very closely to those given by the above authors and by Law,⁴ except that these authors describe loss of appetite and state that the affected animal is apt to lie on its back. Neither of these symptoms was present. Young ducks raised with the geese were not affected. There

was no noticeable disease in any chickens on the farm. On August 7, 1927, a gosling from this flock was received at the laboratory. The gosling, weighing about two pounds, was dead, badly decomposed, and the intestines especially in a very bad state of decomposition. The kidneys were greatly enlarged and very light in color, showing on the surface and throughout the kidney substance small nodules, streaks and lines, white or light in color, which, on gross examination, could not be distinguished from retained urates. The entire kidneys were affected. Wet

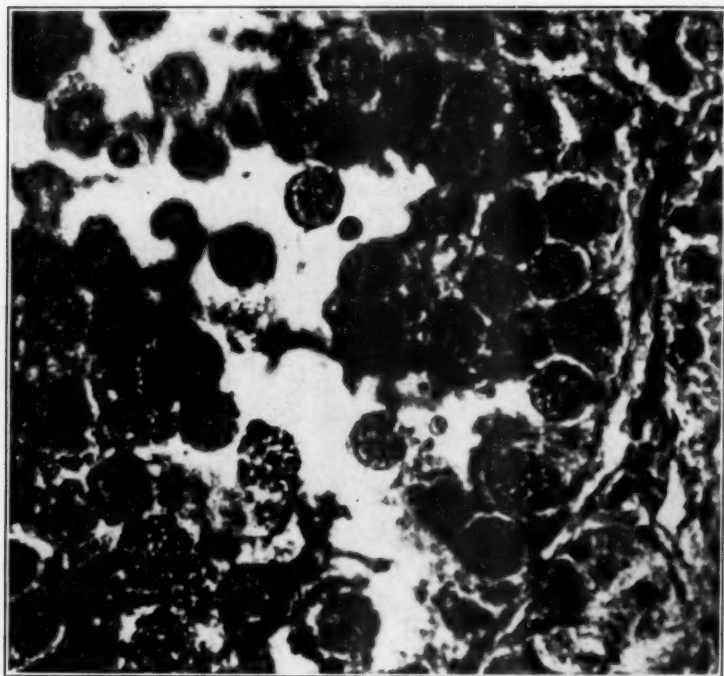


FIG. 2. Renal coccidiosis. Coccidia at the edge of a tubule.

smear preparations from the lumen of the intestines showed numerous bodies identical with oocysts of coccidia. Smear preparations of bits of kidney tissue showed enormous numbers of coccidia-like protozoa in various forms, including oocysts. Measurements of mature cysts showed them to be 20 to 27 by 13 to 15 μ in size. A micropyle was not observed. Sections from kidneys for microscopic study showed destruction of the cells of the tubules by coccidia and by swelling of the affected cells, with resulting pressure on unaffected cells and tubules. About

20 per cent of the tubules were affected. They were engorged with coccidia and a small quantity of urates, so that the diameter of affected tubules was five to ten times that of unaffected ones. There were few leucocytes (see figures). Attempts to produce sporulation were not made because of advanced decomposition. From the similarity of findings to those recorded in the literature, it is concluded that the organism observed is the *Eimeria truncata* of Railliet and Lucet.

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³Lerch, M.: *Zeit. f. Infekt. d. Haust.*, xxv (1923), p. 122.
⁴Law, J.: *Veterinary Medicine (Ithaca, N. Y., 1909)*, V, p. 537.

ASPERGILLUS FUMIGATUS INFECTION OF THE KIDNEY

By M. W. EMMEL, *East Lansing, Mich.*

Michigan Agricultural Experiment Station

An interesting case of infection by *Aspergillus fumigatus* was recently brought to our attention. The chick was about eight weeks old and aside from a slight droopiness showed little evidence of being affected.

The anterior two-thirds of the right kidney was covered with a greenish brown growth of *Aspergillus fumigatus*. The growth was very adherent as the mycelial threads penetrated the capsule and entered the adjacent parenchyma of the kidney.

This fungus has been observed to produce areas of necrosis in the kidney and other visceral organs when injected intravenously or intraperitoneally, but little evidence can be found that natural infection may involve these organs.

ARTHRITIS IN THE PIGEON CAUSED BY SALMONELLA SCHOTMULLERI

By M. W. EMMEL, *East Lansing, Mich.*

Michigan Agricultural Experiment Station

Recently three pigeons were brought to the laboratory for diagnosis. Two were suffering from arthritis of the left humero ulnar-radial articulation, while the third had both wings involved. The wing on the side of the affected articulation drooped slightly, but the birds were able to fly. Otherwise the birds appeared perfectly normal.

The articulations mentioned above were considerably swollen, in a few cases the swelling extending slightly above the feathers. One articulation was very firm, but the others were all soft and rather pliable and evidently painful to palpation.

The birds were from a flock of 700 pigeons and were three of nine so affected. The condition had a history of gradual development.

The swellings were properly cleaned and incised with a sterile scalpel. A portion of the thick, brownish fluid was removed with a sterile loop and cultured. An organism, later identified as *Salmonella schotmulleri*, was obtained in practically pure culture. No evidence can be found in the literature that this organism may cause arthritis in pigeons.

CONGENITAL DEFECT OF THE STOMACH OF A DOG

By CARL F. SCHLOTTHAUER

*Division of Experimental Surgery and Pathology,
The Mayo Foundation, Rochester, Minnesota*

This case of congenital defect of the stomach occurred in a male Boston terrier. The dog was approximately eight months old when I first saw him and was in good flesh. He snuffled and coughed constantly, and vomited frequently. The character of the vomitus depended on the length of time after eating. If he fasted he vomited clear mucus.

Careful general examination did not reveal a definite cause for the trouble. However, he had a very short head with a deep stop. Because of this, the pillars of the soft palate were relaxed and caused the palate to fill the pharynx almost completely, thus permitting the uvula to enter the larynx. In the absence of other lesions, this was considered as a possible cause for his symptoms. It was advised that the dog be returned to his home and be fed small quantities of food at frequent intervals for a period of six weeks, and if this did not relieve the condition to perform uvulectomy.

The dog was seen again, three months later. At this time his owner stated that the symptoms were gradually increasing in severity. The dog had lost flesh and was rather dyspneic. He became cyanotic on the least exertion. The owner asked us to have uvulectomy performed and if this failed, he wished to have the dog killed. The operation was performed under ether

anesthesia, by cautery. The procedures were not difficult and were practically bloodless. The operation, however, did not relieve the animal and he was killed.

Necropsy was performed and on opening the thorax and abdomen a hugely dilated esophagus and malformed stomach were exposed (fig. 1). The cardia was funnel-shaped and continuous with the esophagus. When the stomach was moderately filled, the esophagus became dilated to a diameter of 4.5 cm., and occupied nearly half of the thorax. This compressed the lungs laterally and ventrally and no doubt was responsible for the symptoms of dyspnea.



FIG. 1. Congenital dilatation of the esophagus and malformation of the stomach of a dog.

The tissues of the stomach, unfortunately, were not studied histologically. Therefore it is not known whether sphincter fibers at the cardia were completely absent. Macroscopically they were not demonstrable. The absence of such sphincter mechanism permitted food to pass freely from the stomach into the esophagus, and the stomach was extended from the pharynx to the pylorus.

Because of the early manifestation of symptoms and the absence of other lesions, it may be assumed that the defect was of congenital origin.

RUPTURED STOMACH IN A MULE

By EARLE L. KITTRELL, *Augusta, Ark.*

On an early morning call I found a mule badly swollen and, looking around the lot, I saw evidence which led me to believe that the mule had been sick all night. He had been on pasture

for several days, was brought in and worked and then fed corn and hay the evening before. I passed a trocar into the cecum, but did not find any gas. Then I tried the second and third colon, but without result. I also tried through the rectum. Then I passed a double stomach-tube, but obtained very little gas. I used some warm water to wash out the stomach, but could not get any of the water back through the return tube. Then I passed a trocar into the peritoneal cavity and there was an escape of gas. My diagnosis was ruptured stomach. An autopsy, performed four hours later, confirmed my diagnosis.

New Blue Food Dye Approved

Another food dye has been approved for addition to the list of colors that will be certified by the U. S. Department of Agriculture, according to a recent announcement by the Food, Drug and Insecticide Administration.

This color, which will be known as Brilliant Blue FCF and which has been known chemically for many years, has been tested both chemically and physiologically and found to be harmless to health and otherwise suitable for food use, according to the federal food officials. Copies of the description, specifications and special analytical methods for the dye will be sent upon request to any interested parties. Requests should be addressed to the Food, Drug and Insecticide Administration, U. S. Department of Agriculture, Washington, D. C.

Notes

Mr. Charles Johnson, of Sherman, Conn., has been appointed Commissioner of Domestic Animals of Connecticut, succeeding Mr. James M. Whittlesey, of Lakeside, who has filled this position for the past eight years.

Dr. A. Ramos, a graduate of the Alfort Veterinary School, has been appointed Chief of the Section of Animal Industry, Department of Agriculture of Cuba.

The city of Fayetteville, Ark., recently put into effect an ordinance requiring the agglutination test of all cows furnishing milk to the city of Fayetteville. The tests were conducted by Dr. J. F. Stanford (McK. '08), City Veterinarian, and Dr. William L. Blecker (O. S. U. '17), Bacteriologist and Associate Veterinarian, University of Arkansas.

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ARMY VETERINARY SERVICE

CHANGES RELATIVE TO VETERINARY OFFICERS

Regular Army

The appointment of Dr. Harvie R. Ellis, Memphis, Texas, as 2nd lieutenant, Veterinary Corps, Regular Army, effective June 24, 1929, is announced. Lieutenant Ellis has been directed to report at Fort Sill, Okla., for duty, and will be a member of the next class at the Army Veterinary School.

Captain Sawyer A. Grover is relieved from duty at Ft. Howard, Md., and will sail from New York City, on or about November 22, 1929, for the Panama Canal Department, reporting upon arrival to the commanding general for assignment to duty.

Lt. Colonel Andrew E. Donovan is relieved from duty at headquarters, 1st Corps Area, Boston, Mass., and will sail from New York City, on or about December 11, 1929, for duty in the Hawaiian Department.

Captain Howard N. Beeman is assigned to duty at Carlisle Barracks, Pa., effective upon completion of his present tour of foreign service in the Philippine Department.

Colonel W. Geo. Turner, the Director of the Veterinary Corps, and family are spending a month's leave along the coast of Maine. They will return to Washington about the middle of August.

Veterinary Reserve Corps

New Acceptances

Bernard, Ernest P.	2nd Lt.	Melvin, Clinton County, Ohio.
Craver, Thomas Wilford	2nd Lt.	234 Holmes St., Youngstown, O.
Daughtrey, F. D.	2nd Lt.	38 18th Avenue, Columbus, O.
Everson, Clyde L.	2nd Lt.	Darlington, Ind.
James, Wm. Arthur	2nd Lt.	R. F. D. No. 3, Cortland, Ohio.
Latshaw, Clifton	2nd Lt.	149 E. Washington St., Shelbyville, Ind.
Lidikay, Henry A.	2nd Lt.	Darlington, Ind.

Promotions

Johnson, Elmer J.	to Major	Box 730, Excelsior Springs, Mo.
Warmoth, Wm. D.	1st Lt.	Macon, Ga.
Giles, N. Basil	Major	Box 144, Albany, Mo.
Parker, Carl	Capt.	930 Baltimore Ave., Kansas City, Mo.
Fullington, H. C.	Capt.	6407 Greenwood Ave., Seattle, Wash.
Arburua, Jos. M.	Major	26 Fell St., San Francisco, Calif.
Croll, Forrest B.	Major	819 Minnesota Ave., Kansas City, Ks.
Weaver, G. S.	Capt.	517 Medary Ave., Brookings, S. D.

COMMENCEMENT

A. AND M. COLLEGE OF TEXAS

At the 1929 commencement exercises of the Agricultural and Mechanical College of Texas, the degree of Doctor of Veterinary Medicine was conferred upon D. B. Anderson.

COMMUNICATION

GRADUATE VETERINARIANS

TO THE EDITOR:

I may be of interest to the members of the A. V. M. A. to learn that the total number of degrees conferred by the veterinary schools of the United States and Canada has been about 19,565. However, from the foregoing number, 328 should be deducted, due to duplications and triplications in the conferring of two—and in a few instances three—degrees upon the same individual. This indicates that the total number of graduates has been about 19,237.

J. P. FOSTER,

*Member, A. V. M. A. Committee
on History*

Minneapolis, Minn., August 20, 1929.

Exhibitors At Detroit Convention

Abbott Laboratories, North Chicago, Ill.
Allied Laboratories, Inc., Chicago, Ill.
American Veterinary Laboratories, Kansas City, Mo.
Battle Creek Dog Food Co., Battle Creek, Mich.
Becton, Dickinson & Co., Rutherford, N. J.
Corn States Serum Co., Omaha, Nebr.
Cutter Laboratory, Berkeley, Calif.
Denver Chemical Mfg. Co., New York, N. Y.
Alexander Eger, Chicago, Ill.
Fort Dodge Serum Co., Fort Dodge, Iowa.
Haver-Glover Laboratories, Kansas City, Mo.
Jensen-Salsbery Laboratories, Kansas City, Mo.
Johnson & Johnson, New Brunswick, N. J.
Ketchum Manufacturing Co., Luzerne, N. Y.
Lederle Antitoxin Laboratories, New York, N. Y.
Ashe Lockhart, Inc., Kansas City, Mo.
H. K. Mulford Company, Philadelphia, Pa.
Norden Laboratories, Lincoln, Nebr.
Sharp & Smith, Chicago, Ill.
R. J. Strassenburgh Co., Rochester, N. Y.
Veterinary Medicine, Chicago, Ill.

ASSOCIATION MEETINGS

NORTH CAROLINA STATE VETERINARY MEDICAL ASSOCIATION

Asheville, N. C., "The Land of the Sky," was genial host to the twenty-eighth annual convention of the North Carolina State Veterinary Medical Association, June 26-27-28, 1929. The local veterinarians left none of the mountain boulders unturned to see that all in attendance had their every wish fulfilled. There was golf for the "golf bug"; midnight lunches for the hungry; and sunrise on the mountain peak for those who wanted to see the "mountain-dew." The ladies had a program of their own and could be found only at meal time. They visited the Grove Park industries where raw wool is woven into the old-fashioned homespun cloth by hand, as was done by our forefathers. They also took a number of sight-seeing trips around Asheville and to nearby points.

In his presidential address, Dr. E. L. Shuford related some of the accomplishments of the veterinary profession in North Carolina during the past year. North Carolina was the first state in the Union to become modified accredited area in the eradication of bovine tuberculosis. The State now boasts of the fifth and sixth counties in the United States having all pure-bred dairy sires in the county.

Dr. D. E. Sevier, city health officer of Asheville, spoke most interestingly on the relation of the veterinary and medical professions, bringing to our attention the close alliance of the two groups and the wonderful progress both have made during the past forty years.

Dr. William Moore, State Veterinarian, spoke briefly and impressively of some of the achievements of the late Dr. M. J. Ragland, of Salisbury, a member of the Association for twenty years.

Dr. C. E. Salsbery, of Kansas City, Mo., spoke briefly on the subject of sweet clover poisoning. He told of the work he was now doing in conjunction with the University of Nebraska and some of the findings already made. The danger of sweet clover poisoning is in the feeding of the matured, or dry clover, and not in grazing upon it.

Dr. Adolph Eichhorn, of Pearl River, N. Y., gave a short, but interesting, address on rabies. He stated that no disease could

be eradicated more easily. The Japanese authorities have vaccinated over a million dogs with the single-injection method and have had only 233 cases of rabies develop among the dogs vaccinated. Most of these cases were found to have been exposed prior to vaccination, according to Dr. Eichhorn. The three methods of rabies control now considered are quarantine, muzzling and vaccination. Dr. Eichhorn stated that the American people have about the same views on quarantine and muzzling of their dogs as they have about prohibition, "They just don't stand for it." Get rid of the stray dog and protect the others and we will be rid of rabies, in the opinion of Dr. Eichhorn.

After a visit to Asheville's million-dollar City Hall and the City Bacteriological Laboratory, Thursday morning, the members, visitors and their wives had a most pleasant visit to the famous Biltmore Forest and over the estate of the late George Vanderbilt, climaxed by a bounteous luncheon at the Biltmore Dairies, sponsored by the local veterinarians and their wives.

At three o'clock another literary session was called to order at the Battery Park Hotel, with Dr. W. E. Cotton, of Bethesda, Md., giving a very interesting and instructive address on contagious abortion in cattle. Dr. Cotton told something of the research work being done at the B. A. I. Experiment Station with particular reference to abortion and what has been accomplished thus far.

Botulinus poisoning was the subject brought to the attention of the Association of Dr. C. E. Salsbery. He described the three types, A, B and C. Dr. Salsbery stated that A was the type found principally in the West; type B in the East and both A and B in the Central States. He stated that forage poisoning was botulism in most cases. Horses are affected with all types; cattle with type B; and chickens usually with type A. Considerable discussion followed Dr. Salsbery's address.

Dr. H. J. Milks, of Cornell University, then gave a very good discussion on some of the newer drugs, their actions and uses. Many of these are of much value to the veterinary profession, according to Dr. Milks, while some are no better than the old standbys that we have used for a number of years.

Thursday evening was devoted to a delightful banquet which was relished by sixty-four veterinarians, their wives and visitors.

At the business session Friday morning, reports of various committees were made, followed by the election of officers, which resulted as follows: President, Dr. Adam Fisher, Charlotte;

first vice-president, Dr. W. T. Scarborough, Raleigh; second vice-president, Dr. W. A. Hornaday, Greensboro; secretary-treasurer, Dr. J. Howard Brown, Rich Square.

At the general session Friday morning, Dr. Eichhorn gave a most interesting outline of how Dr. Laidlaw and Major Dunkin had made their findings after five years of research work with canine distemper. As much has been in print recently, we will not relate here the many interesting details brought out by Dr. Eichhorn.

Dr. Milks gave an interesting talk on small-animal practice. He related many points in the routine treatment of several ailments of both dogs and cats, outlining in each case the treatment that had proven most satisfactory in his hands.

Friday afternoon was given over to a trip to the top of Mount Pisgah, which stands 5,708 feet high at the back door of Asheville. Near the summit a watermelon feast was pleasantly participated in by the mountain-climbing veterinarians and their wives.

This meeting will go down in the history of the Association as one of the most pleasant and profitable in many years.

W. T. SCARBOROUGH, *Secretary.*

VETERINARY ASSOCIATION OF MANITOBA

The fourth annual summer clinic of the Veterinary Association of Manitoba was held at the Brandon Winter Fair Building, July 5, 1929. Between forty and fifty members from all parts of the Province were in attendance.

Dr. H. H. Ross, of Brandon, had charge of the local arrangements of the meeting, assisted by Drs. J. F. and J. R. Fisher, S. A. and S. J. Coxe, and S. J. Gibson, of Brandon. A good program had been arranged and operable cases obtained, which furnished a whole day's highly interesting educational work.

The meeting was opened at 9:00 a. m. by an address of welcome from Mayor Cater, who referred to the increasingly large number of entries of valuable pure-bred live stock at the Brandon Exhibition as an indication that the veterinary profession should become more profitable and hold a high standing in the Province.

Dr. W. F. Guard, of Ames, Iowa, was the chief operator and demonstrator and was ably assisted in carrying out the various operations by the following members: Dr. O. McGuirk, Dauphin; Drs. M. T. Lewis and H. R. McEwen, Stonewall; Dr. J. W. Fasken and Dr. H. Bradshaw, Portage la Prairie; Dr. N. V.

James, Winnipeg; Dr. W. F. Sirett, Minnedosa; Dr. G. A. Bowman, Treherne; Dr. W. C. Hodgins, Oak Lake; and Dr. E. D. Bowes, Boissevain.

The following operations were successfully carried out and the technic of each case demonstrated by Dr. Guard in a very thorough and practicable manner, which was highly appreciated by his audience:

Poll evil in mare (in connection with this operation Dr. Guard also demonstrated the latest technic in the operation for fistulous withers).
Malignant tumor in eye of gelding.
Actinomycotic growth in cow.
Gravel in hoof of horse.
Ovariectomy in bitch.
Fistula in lumbar region in dog.
Trephining in horse.

A case of teat stricture in a cow was presented, but was not proceeded with, as it had developed into a fibrous quarter and no operation could be successful. However, Dr. Guard gave a very interesting talk on teat tumors, hard milkers, barb-wire cuts in teat and mastitis, which brought out a good discussion.

In the evening a banquet was held in the Oak Room of the Prince Edward Hotel, the chair being taken by Dr. A. Savage, of the Manitoba Agricultural College. Speeches were made by the President of the Association, Dr. Owen McGuirk, Dauphin; Dr. J. B. Still, chief veterinary inspector for Manitoba Health of Animals Branch; Drs. H. H. Ross and J. F. Fisher, Brandon; Dr. W. F. Guard, Ames, Iowa; Dr. T. King, Souris; and Dr. M. Whimster, Hamiota. The speeches were interspersed with a number of musical items and a most enjoyable evening was spent.

A vote of condolence to the widow of the late Dr. H. R. Estes, of Brandon, was also passed.

WM. HILTON, *Secretary*.

KENTUCKY VETERINARY MEDICAL ASSOCIATION

The annual meeting of the Kentucky Veterinary Medical Association was held at the Brown Hotel, Louisville, July 10-11, 1929. The program included the following:

"Rabies," by Dr. L. H. South, State Board of Health, Louisville, Ky.

"Distemper in Dogs," by Dr. Ashe Lockhart, of Kansas City, Mo.

"Equine Influenza," by Dr. E. A. Caslick, of Paris, Ky.

"The Practicing Veterinarian and his Connection with the Eradication of Bovine Tuberculosis," by Dr. J. E. Gibson, U. S. B. A. I., Indianapolis, Ind.

"John's Disease," Dr. T. P. Polk, of Lexington, Ky.

"Sheep Scabies: Practical Ways for Its Control," by Dr. Warren Sorrell, of Lexington, Ky.

"Cattle Diseases," by Dr. W. A. Axby, of Harrison, Ohio.

"Prevalence of Certain Infectious and Contagious Diseases," by Dr. D. E. Westmoreland, State Veterinarian, Frankfort, Ky.

A special feature of the business session was the report of the Publicity Bureau, which brought out many valuable points and suggestions. The election of officers for the ensuing year resulted as follows: President, Dr. C. E. Palmer, Shelbyville; first vice-president, Dr. F. H. Riester, Buechel; second vice-president, Dr. A. J. Steiner, Lexington; third vice-president, Dr. W. H. Simmons, Louisville; secretary-treasurer, Dr. C. G. Kreidler, Maysville.

C. G. KREIDLER, *Secretary-Treasurer.*

OKLAHOMA STATE VETERINARY MEDICAL ASSOCIATION

The Oklahoma State Veterinary Medical Association held an unusually successful summer meeting July 9-10, 1929, at Bartlesville. On the first day of the meeting the members, their families and friends were guests of Mr. Frank Phillips, at his beautiful ranch and wild game reserve, near Bartlesville, where they were entertained by a sight-seeing trip over one of the most interesting places in the entire United States. Other features that were enjoyed immensely by visiting members were a rodeo, a bathing party and an excellent barbecue luncheon. Dancing in the open-air pavilion closed the day's festivities.

Association business, committee reports and a round-table discussion, led by Dr. Chas. E. Salsbery, of Kansas City, Mo., marked the second day of the meeting. Approximately forty members attended the business and professional meeting, while the attendance at the picnic was estimated at 140.

C. H. FAUKS, *Secretary.*

NORTH DAKOTA VETERINARY ASSOCIATION

The twenty-seventh annual meeting of the North Dakota Veterinary Association was held at the State College, Fargo, July 11-12, 1929. An exceedingly interesting and useful program was presented during the meeting, which had an enthusiastic attendance of fifty veterinarians of the State and from Minnesota.

The session opened with a business meeting in which President H. P. Roberts for his address presented some useful suggestions

for sanitary milk control. The following officers were elected for the ensuing year. President, Dr. L. A. Benson, Grand Forks; Vice-President, O. D. Foss, Christine; Secretary-Treasurer, Lee M. Roderick, State College Station, Fargo. The address of the morning was by Dr. T. E. Munce, president of the American Veterinary Medical Association, in which he outlined the progress of the Association for the year and reported on the assistance which the organization had rendered the profession.

The program for the afternoon consisted of two valuable contributions which were of interest to all. Dr. Benjamin Schwartz, Senior Zoologist of the Bureau of Animal Industry, Washington, D. C., presented a paper on "The Relation of Parasites to the Live Stock Industry." He gave the essential details of the more important parasitologic conditions of farm live stock in a clear, concise manner and gave the available means for control. Dr. T. E. Munce then discussed "Bang Disease from a Regulatory Standpoint" and gave an encouraging report on the success and progress of the Pennsylvania plan for the control of the disease.

The program for the second day was opened by Dr. M. G. Fincher, of the Department of Medicine of the New York State Veterinary College at Cornell, with "Important Problems in Cattle Practice." Definite and concrete suggestions were given for handling abortion disease, other genital disturbances, metritis, retained placenta and the starting of young calves. Dr. W. L. Boyd, of the University of Minnesota, followed with a further summary of abortion disease and a discussion on "Some of the Common Diseases of Sheep."

The afternoon session was opened with a paper by Dr. H. C. H. Kernkamp, of the University of Minnesota, on "Diseases of the Respiratory and Digestive Tracts of Swine." It was illustrated with a postmortem demonstration. Dr. Schwartz furnished an instructive and interesting feature with a demonstration of the internal parasites from recently killed sheep. Dr. Boyd demonstrated the emasculator in the docking of lambs. The demonstration program was concluded by Dr. Fincher, who performed a rumenotomy in a unique manner and gave his methods of handling teat and udder conditions by showing his procedures on fresh material.

LEE M. RODERICK, *Secretary.*

SOUTH CAROLINA ASSOCIATION OF VETERINARIANS

The twentieth annual meeting of the South Carolina Association of Veterinarians was held in Hartsville, July 16-17, 1929, at the Country Club. Dr. G. J. Lawhon was in charge of local arrangements and he had planned a very good time for all.

The program was full of interest and enthusiasm at every session and some valuable papers were read and discussed. The program follows:

- "Review of Recent Investigation of Distemper in Dogs," Dr. W. A. Barnette, of Greenwood, S. C.
- "Technic in Obtaining Blood Samples in Chickens and Cattle," Dr. R. A. Mays, of Columbia, S. C.
- "Veterinary Medicine and Its Relation to Undulant Fever and Rabies in the Human," Dr. H. M. Smith, of Columbia, S. C.
- "Parasites," Dr. A. G. G. Richardson, of Athens, Ga.
- "Poultry Clinic," Dr. O. L. Osteen.
- "Minerals," Dr. Adam Fisher, of Charlotte, N. C.
- "Retained Placenta," Dr. W. K. Magill, of Chester, S. C.
- "Foot-and-Mouth Disease," Dr. A. A. Husman, of Raleigh, N. C.
- "Starting a Hospital," Dr. F. P. Caughman, of Columbia, S. C.

The program also included a talk by Dr. William Moore, state veterinarian of North Carolina.

A trip was made to the Coker Pure Seed Farm, where experiments with all seeds of this section are being carried on and much improvement of the plants in this state has resulted therefrom.

A banquet was held on the evening of the first day, with the largest attendance in the history of the Association. Many ladies were present at this delightful affair and were entertained in many ways by Mrs. Lawhon. Mr. D. R. Coker was the speaker at the banquet and he explained in a brief way some of the work accomplished at the seed farms.

Several new names were added to the membership roll of the Association.

At the invitation of the members of the North Carolina State Veterinary Medical Association, it was decided to hold next year's meeting with them in Charlotte, N. C.

M. R. BLACKSTOCK, *Secretary*.

NEVADA STATE VETERINARY ASSOCIATION

The mid-year meeting of the Nevada State Veterinary Association was called to order at 2:00 p. m., July 17, 1929, by President G. T. Woodward, at Dr. Reagor's hospital, 30 California Ave., Reno, Nevada.

Dr. K. W. Niemann, assisted by various members of the

Association, gave a demonstration of the use of epidural anesthesia in connection with several operations upon small animals.

Later the meeting adjourned to the Nevada Agricultural Experiment Station Farm, where Dr. L. R. Vawter gave a demonstration on the use of the Burdizzo forceps in bovine emasculation. Several young steers previously operated on by this method were examined.

The meeting recessed at 5:30 p. m. and reconvened in the Agricultural Building at the University of Nevada, at 8:00 p. m.

Roll-call showed eleven members and four visitors—Drs. Swaney, Hover, Henderson and Niemann—present. Upon motion of Dr. Dill, seconded by Dr. Fisher and carried, Dr. G. T. Woodward was designated as a delegate to represent the Association at the Fourth Annual Conference of Accredited Delegates from State, Territorial and Provincial Veterinary Associations, at Detroit, Mich., on August 12, 1929, with Dr. L. R. Vawter as an alternate.

Dr. F. E. Henderson presented a paper on "Anaplasmosis of Cattle," the discussion of which was opened by Dr. W. H. Hilt. Dr. W. B. Earl gave a brief talk on "Garbage Feeding Plants and Hog Cholera Control." Various case reports and questions were presented by different members for discussion.

The local anatomy involved in epidural anesthesia was given further consideration by Dr. Niemann and other members, in connection with the skeletons of the various domesticated animals in the University Anatomical Laboratory.

Upon motion of Dr. Vawter, seconded by Dr. Bamberger, Dr. Reagor was extended a vote of thanks for his services and the use of his hospital in connection with the afternoon clinic.

The meeting adjourned at 10:10 p. m.

EDWARD RECORDS, *Secretary*.

ONTARIO VETERINARY ASSOCIATION AND CENTRAL CANADA VETERINARY ASSOCIATION

As a result of mutual arrangement, these two organizations decided to hold a joint meeting at the old historic city of Kingston, Ontario. The arrangements for the program were completed and the meeting held on July 19-20, 1929. The attendance at the meeting was splendid, upwards of 120 being present during the discourses.

Dr. J. S. Glover, president of the Ontario Veterinary Association, occupied the chair on the opening day and gave the initial

address. In the course of his remarks Dr. Glover indicated his pleasure on being called upon to open a joint meeting of the two Associations and paid tribute to the executives of both organizations for the splendid manner in which they had cooperated to bring about this outstanding event in their histories. Welcome was extended to all new members of both associations and to the visitors at the conference. Mention was made of the necessity of having strong organizations in order to keep the problems of the profession well in hand and to advance the prestige of it legitimately. The usefulness of veterinary science is increasing and it was imperative that all members of the profession be loyal to their organizations and seek to bring about a proper recognition of the service rendered.

A short business meeting of each organization was held, followed by a combined business meeting in which Dr. Glover was made an honorary member of the C. C. V. A. and Dr. Higginson an honorary member of the O. V. A. Others business items consisted of discussing ways and means of having detailed reports of the meeting printed and published for distribution and also methods which might be adopted to increase membership.

In the afternoon session a telegram was read from the only existing charter member of the O. V. A., Dr. Joseph Hawkins, of Detroit, Mich. The first paper on the program was by Dr. H. S. MacDonald, of Toronto, on "The Use of Ultra-Violet Rays in Small Animal Practice." The subject was well received and gave rise to considerable discussion. In the absence of Dr. C. D. McGilvray, Dr. J. Brown was called upon to make a few remarks. He dealt with the coming conference for practitioners which was to be held at the Ontario Veterinary College and brought out the needs of the course of studies suggested and also appealed to those present to give it their very best support. Dr. A. H. Baker, of Montreal, the oldest living instructor of veterinary science in Canada, also gave a short address of an historical and complimentary character. The third item was on "Pullorum Disease." The subject was very completely dealt with by Dr. R. Gwatkin, and further discussed by Dr. C. H. Weaver. "Acute Digestive Disturbances in Cattle" was the subject matter of an able discourse by Dr. C. M. Higginson. The interest manifested by the remarks which followed indicated the importance of this topic to practitioners.

At the evening session Dr. C. M. Higginson, president of the C. C. V. A., acted as chairman and introduced Dr. A. L. McNabb, Director, Provincial Board of Health Laboratories, who spoke on the topic "Milk-borne Diseases in the Province of Ontario." The speaker dealt chiefly with undulant fever and to a lesser extent with other milk-borne infections. Dr. E. A. Watson, of Ottawa, was the next speaker and he gave a resume of B. C. G. vaccination by Calmette and Guérin of France, followed by his own report of experiments carried out at Ottawa on B. C. G. vaccine. His findings did not coincide satisfactorily with those of Calmette and Guérin but it was his intention to continue investigating the use of the vaccine to determine its value definitely. "Prophylactic vaccination against Rabies" and "The Control of Canine Distemper by the Laidlaw-Dunkin Method" were subjects discussed by Dr. A. Eichhorn. The attention given and the interest shown during this able discourse compliment Dr. Eichhorn's ability in dealing with subjects of this nature. The final topic of the evening session was "Dairy Inspection and the Inspector's Duty in Public Health Work," by Dr. J. B. Hollingsworth, of Ottawa.

On the second day, the opening address was given by Dr. W. R. Wood, of Montreal. This was one of the most outstanding addresses of the meeting and was on the subject of "Food Inspection in Canada." The various phases of the topic were very capably dealt with. "Methods of Clinical Examination of Breeding Animals" and "The Value of Laboratory Studies in Relation to Genital Diseases" were discussed and demonstrated with lantern-slides by Dr. R. L. Conklin, of MacDonald College. Following this a comprehensive address on "Parasitism in Domestic Animals in Eastern Canada" was given by Dr. L. Stevenson, of Guelph, Ontario.

The afternoon of the second day was devoted to clinical demonstrations which had been prepared for by Col. Tamblin, Veterinary Officer for the Kingston Military District. The clinic was held in the military barracks and with their equipment, Drs. W. J. R. Fowler, T. B. Major, R. L. Conklin, T. B. Buckley and H. Murphy being the clinicians.

The meeting was attended by a large number of physicians and health officers who took a keen interest in all of the proceedings and who voiced their appreciation of the high order of the addresses given and the discussions which followed. Members of the Kiwanis Club of the City were on hand with twenty

automobiles and very kindly provided a tour of the City for the visiting members. All those present from both organizations expressed themselves as being delighted with the new venture of a joint meeting and indicated that it would be a wise policy to follow in the future.

R. A. McINTOSH,
A. V. M. A. Resident Secretary for Ontario.

COLLEGE OF VETERINARY SURGEONS OF THE PROVINCE OF QUEBEC AND VERMONT VETERINARY MEDICAL ASSOCIATION

A joint meeting of the College of Veterinary Surgeons of the Province of Quebec and the Vermont Veterinary Medical Association was held at Queens Hotel, Montreal, July 26-27, 1929. The meeting was called to order in Salon A, at 11 a. m., by President A. A. Etienne, of Montreal. Dr. D. Genereux, of the Executive Council, welcomed the convention in behalf of the Mayor of Montreal. This was responded to very fittingly by President Etienne, for the Quebec veterinarians, and Vice-President Kennedy, for the Vermont Association. The following addresses were delivered:

"Poultry Diseases," Dr. Harry W. Jakeman, Boston, Mass.

"Rabies, Preventive Treatment and Serotherapy," Dr. F. T. Daubigny, Montreal, Que.

Lunch was served in the Queen's Grill, and the convention reconvened at 2 p. m., with the following addresses:

"Food Inspection, Its Relation to Public Health," Dr. W. R. Wood, Montreal, Que.

"Tuberculosis Eradication in Vermont," Commissioner E. H. Jones, Montpelier, Vt.

"Mastitis and Its Treatment," Dr. John Thomas, Wells River, Vt.

"Missed Opportunities of the Veterinarian," Dr. J. A. Rajotte, Drummondville, Que.

"Tuberculosis Eradication in Vermont, Phases in Federal Cooperation," Dr. L. H. Adams, Montpelier, Vt.

Dr. G. T. Labelle and A. J. G. Hood, of Montreal, gave a summary of tuberculosis eradication work as conducted in the provinces. As a final summing-up of the day, a question-box brought out many helpful discussions. At 8 p. m., the two associations went into separate sessions for business meeting and election of officers. The following were elected officers for the Vermont Association: President, Dr. K. M. Kennedy, Waterbury; 1st vice-president, Dr. W. A. Hamilton, Danville, Vt.; 2nd vice-president, Dr. W. C. Pulsifer, Woodstock; secretary and treasurer, Dr. G. N. Welch, Northfield. Dr. Welch was also

elected to represent the Vermont Association at the A. V. M. A. convention to be held in Detroit, Mich., in August.

Saturday both Associations convened at the hospital of Drs. Etienne & Etienne, on Drummond Street, when an all-day clinic was held, consisting of many major operations on both large and small animals.

At 8 p. m., a banquet was held in the special dining-room at Queens Hotel which left nothing to be desired, with roast turkey as the foundation. Following some after-dinner speaking by both Canadian and Vermont veterinarians, dancing was enjoyed until a late hour, in one of the many dining rooms at the Queens. Some 250 veterinarians and lady friends attended the banquet and, while this is probably the first international meeting of local veterinary organizations in the East, it was the consensus of opinion of both Associations that it would not be the last one. Certainly the Vermonters were royally entertained by their fellow members "across the line." President Etienne and his committee deserve great credit for their work and hospitality in making the meeting a success.

L. H. ADAMS, A. V. M. A. *Resident Secretary*
for Vermont.

MINNESOTA STATE VETERINARY MEDICAL SOCIETY

The seventh annual Short Course for Veterinarians and the thirtieth semi-annual meeting of the Minnesota State Veterinary Medical Society were held jointly, as usual, at University Farm, St. Paul, on July 10-11, 1929. More than 150 veterinarians were registered at this meeting. The weather man was propitious and furnished an excellent brand of weather.

Dr. Harry Evenson, of Sacred Heart, presided at all the sessions. Greetings to the Society from the University of Minnesota were presented by Professor A. V. Storm, Director of Short Courses. Dr. W. F. Guard, Professor of Veterinary Surgery, Iowa State College, Ames, Iowa, discussed important surgical conditions found in the horse. Dr. Guard spoke particularly in regard to conditions of the teeth requiring attention. He also discussed tumors affecting various portions of the head of the horse. The attention of veterinarians has been directed, for the past few years, away from equine practice. It is now returning and Dr. Guard's discussion was of great interest to those present as shown by the questions that were asked after Dr. Guard's completion of his discussion.

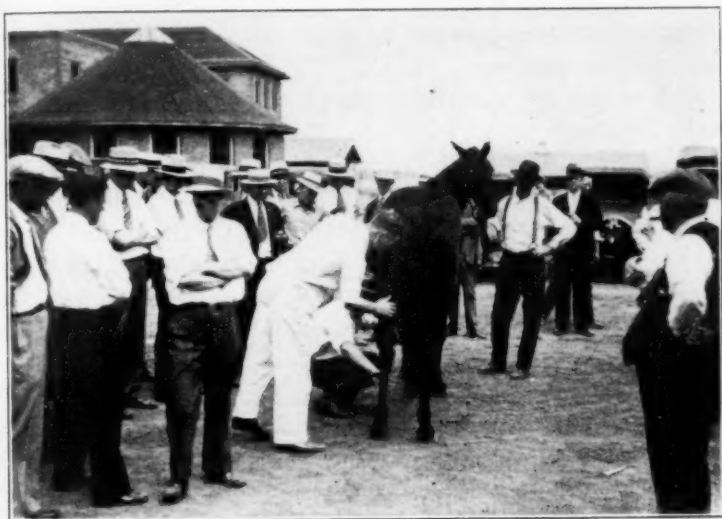
In the afternoon, Dr. T. E. Munce, Director of the Pennsylvania Bureau of Animal Industry, Harrisburg, Pennsylvania, discussed the control of Bang's disease from the standpoint of the official. Dr. Munce described the method that they have used in Pennsylvania for the control of this disease, since 1920. He also discussed the law that was passed by the last session of the legislature, prohibiting the entrance into the state of Pennsylvania of any animal known to be infected with this disease. He also stated that in his state, at the present time, this disease is quarantinable and must be reported by the veterinarian. His discussion was followed by Dr. E. C. Deubler, veterinary practitioner of Newtown, Pennsylvania, on the control of this disease from the standpoint of the veterinary practitioner. Dr. Deubler's discussion was most enlightening. He stated that according to the results in his practice, the application of the so-called Pennsylvania Plan, which applies to blood-testing and removal of reacting animals, was giving excellent satisfaction. He also mentioned that the value of animals coming from clean herds was very much increased. He spoke in particular of a recent sale in one of the counties in Pennsylvania, where the average price of tested animals was greatly in excess of that received for untested ones.

The next paper was by Dr. Chas. Murray, Professor of Veterinary Investigation, Iowa State College, on "Important Diseases of Poultry and Their Recognition, Treatment and Prevention." Poultry practice is assuming a great deal of importance for the practitioner of veterinary medicine. Dr. Murray's discussion of the diseases commonly met with in practice was of great interest to those who heard it. He gave in very simple form those things which could be generally used by the practitioner in the field to combat the diseases of this class of live stock.

At the evening session, Dr. Munce gave a most interesting talk on the American Veterinary Medical Association, and its importance to the practitioners of veterinary medicine. He outlined the activities of the Association, and told the veterinarians that it was their duty to support this organization which was doing so much to aid veterinary medicine in the United States. Dr. Benjamin Schwartz, of the Zoological Division, Bureau of Animal Industry, Washington, gave a most interesting discussion on parasites of live stock. The last paper of the evening was an illustrated talk by Dr. T. G. Fultz, veterinary practitioner of Pella, Iowa, on "Conditions Met with in Swine

Practice." Dr. Fultz's description of cases in his practice was very interesting. Apparently he has run across some unusual conditions in his practice, and has been able to combat them successfully.

On Thursday morning, the first discussion was by Dr. W. L. Boyd, of the Veterinary Division at University Farm, on "Pre-parturient Paresis of Sheep." This condition is becoming more and more common in the state of Minnesota, and practitioners in localities where sheep are kept are constantly confronted with it. Dr. Boyd's discussion was followed by general questions and great interest was manifested in this disease. The next paper was



Dr. W. F. Guard examining a horse for lameness.

by Dr. M. G. Fincher, of the New York State Veterinary College at Cornell University, Ithaca, New York, on "Diseases of Cattle." Dr. Fincher confined himself largely to diseases of the genital tract. In his work in the ambulatory clinic at the College, he has come in contact with a large variety of cases of derangement of the genitalia. Tables showing the variety of cases and their outcome show that he had made a very careful study of the material presented. The final paper was by Dr. W. R. Hobbs, of the Veterinary College of Ohio State University, Columbus, Ohio, on "Important Factors in Small-Animal Practice." In many localities small-animal practice is increasing, even with

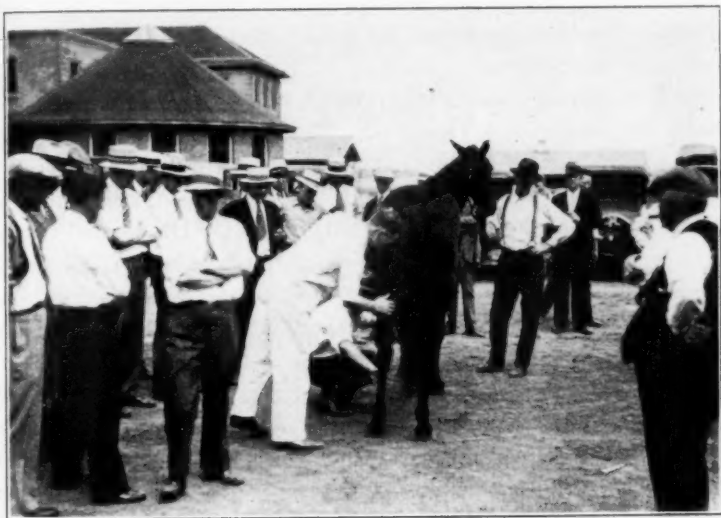
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On Thursday morning, the first discussion was by Dr. W. L. Boyd, of the Veterinary Division at University Farm, on "Pre-parturient Paresis of Sheep." This condition is becoming more and more common in the state of Minnesota, and practitioners in localities where sheep are kept are constantly confronted with it. Dr. Boyd's discussion was followed by general questions and great interest was manifested in this disease. The next paper was



Dr. W. F. Guard examining a horse for lameness.

by Dr. M. G. Fincher, of the New York State Veterinary College at Cornell University, Ithaca, New York, on "Diseases of Cattle." Dr. Fincher confined himself largely to diseases of the genital tract. In his work in the ambulatory clinic at the College, he has come in contact with a large variety of cases of derangement of the genitalia. Tables showing the variety of cases and their outcome show that he had made a very careful study of the material presented. The final paper was by Dr. W. R. Hobbs, of the Veterinary College of Ohio State University, Columbus, Ohio, on "Important Factors in Small-Animal Practice." In many localities small-animal practice is increasing, even with

the country practitioner. Dr. Hobbs' discussion was listened to with great interest.

The afternoon was devoted to the clinic, which was in charge of Dr. W. L. Boyd. Various cases were presented which were discussed and operated upon, if necessary, by experts in their particular fields.

The equine clinic proved to be an unusually interesting one, and was as large and varied as was presented at the A. V. M. A. in 1928. The following represent the operative cases: laryngeal hemiplegia, 2 cases; scrotal hernia of stallion, which was finally converted into removal of the testes at request of owner; cryptorchids, 2; straight castration, 2; carcinoma of facial sinuses and nasal cavity. This latter case was in the form of an exploratory operation, and on account of its nature and extent it was decided to destroy the patient.

Six horses affected with various forms of lameness were presented for diagnosis. Dr. W. F. Guard was in charge and performed all of the operations except the cryptorchids and straight castrations, which were operated upon in a very skillful manner by Dr. A. F. Lees, of Red Wing, Minnesota. Dr. Guard's work, as in former years, was highly satisfactory and, judging from remarks around the outside, Minnesota veterinarians will again have the pleasure of meeting Dr. Guard in the not-distant future. Dr. W. L. Nilson assisted.

The cattle clinic was in charge of Dr. M. G. Fincher. Dr. Fincher proved to the satisfaction of all that he is not only an astute diagnostician, but a skillful operator as well. Dr. C. R. Donham assisted. The following cases were presented: demonstration of show steers which had previously been Burdizzoed; demonstration of the Johnin test in animals suspected of being affected with paratuberculosis; removal of growth from membrana nictitans (chronic productive inflammation); demonstration of teat surgery; technic for the collection and examination of the semen of a bull suspected of having reduced fertility; epidural anesthesia; umbilical hernia (congenital) in a 7-months-old heifer calf, operated upon by Dr. W. F. Guard; and technic employed in the passing of the stomach-tube in the bovine.

The canine clinic was in charge of Dr. W. R. Hobbs. The interest in this section was keen and well attended. Dr. Hobbs' discussion of the different cases and his operative methods were greatly appreciated. The cases presented included: a bitch with extensive tumors of the mammary glands; a large cyst in the sub-

maxillary region; four bitches on which ovariectomy was performed; a skunk presented for the removal of the scent glands; and two dogs for diagnosis. Dr. Hobbs was assisted by Drs. J. S. Dick, O. B. Morgan, A. A. Feist and E. A. Hewitt.

The swine clinic was in charge of Dr. W. A. Aitken, Assistant Professor of Veterinary Surgery, Iowa State College, Ames, Iowa, assisted by Dr. H. C. H. Kernkamp. Dr. Aitken demonstrated in a clear and concise manner a technic for operating on scrotal hernia of young pigs. The remainder of this clinic consisted of discussions of the non-operative cases submitted. Autopsies



Dr. W. R. Hobbs performing an ovariectomy.

were performed on animals affected with the following diseases: necrotic enteritis; pulmonary strongylosis and hog cholera. The swine section of the clinic was well attended.

The poultry clinic was directed by Dr. Charles Murray. Dr. R. Fenstermacher assisted. Dr. Murray has been with us on numerous occasions and his work, as in former years, was highly commendable. The demonstrations consisted of tuberculin and pullorin tests. Autopsies were conducted on tuberculous birds, and on birds affected with various parasitic conditions.

The sheep clinic consisted of methods used in the castration and docking of lambs.

C. P. FITCH, *Secretary-Treasurer.*

NECROLOGY

CHARLES J. BECKER

Dr. Charles John Becker, Inspector in Charge of the U. S. Bureau of Animal Industry, Baton Rouge, La., died in the U. S. Marine Hospital, New Orleans, La., July 26, 1929, after an extended illness.

Born in Cincinnati, Ohio, August 31, 1873, Dr. Becker attended the public schools of that city and in 1908 was graduated from the Cincinnati Veterinary College.

Dr. Becker first entered the service of the Bureau of Animal Industry as a temporary employe, serving as a tagger in meat inspection work and later as an agent in tick eradication during 1906 and 1907. Following his graduation from the Cincinnati Veterinary College he entered the Bureau service as a veterinary inspector in 1908. He was assigned to tick-eradication duties and, with the exception of a few short details in other Bureau activities, continued in that project until the time of his death. Dr. Becker was one of the pioneers in tick-eradication work in the South and saw active field service in Tennessee, Alabama and Louisiana. He was an efficient, energetic worker, and a capable administrator whose genial disposition won the friendship and esteem of his associates.

Dr. Becker joined the A. V. M. A. in 1908.

MAJOR GENERAL SIR F. SMITH

A real calamity has fallen upon the veterinary profession with the death of Major General Sir Frederick Smith, K. C. M. G., C. B., F. R. C. V. S., on July 27, 1929. It is doubtful if the world has produced a man with greater love and devotion for our profession. He rose from the ranks to the highest position his country could give him as a veterinarian, and he served his country well at home and at various parts of the British Empire, wherever stationed.

Although primarily interested in army veterinary service, his active mind penetrated the needs of the profession. He produced a real text-book on veterinary physiology, which has been the standard for veterinary students for many years. His work on veterinary hygiene was equally authoritative, and in addition

there have been numerous articles and communications from his pen.

Upon his retirement from official duties, and although advanced in years, he undertook the almost superhuman task of writing a history of veterinary literature from the earliest times to the latter part of the nineteenth century. Few realize what a tremendous task this has been and the amount of patient perseverance and tenacity of purpose involved. Two volumes have been published, a third is in print, and the manuscript of the fourth volume is prepared. He has also published a volume on "The History of the Royal Army Veterinary Corps, 1796-1919." Compensation for work of this character has probably been far from adequate in a financial way, but this fact, of itself, emphasizes his unselfishness and spirit of good will toward the progress of veterinary development. The broad scope of his work gives all veterinarians a claim upon him. His fame is not local, he belongs to all of us. We are proud of his accomplishment.

General Smith knew, for over a year, that he was doomed; it was a race with death to complete his manuscript, but, in spite of his disability, his heroism won. In a letter written three weeks before his death he said, "I had hoped to turn out more work, but I am grateful that I have been able to leave the third volume of my "History of Veterinary Literature" in print; the fourth volume (which carries the story down to 1869) in manuscript.

If this is my last letter, I regret our correspondence is closed. Working at a long distance apart I can see that each in his own way has been activated by the same principles of devotion to a profession which needs enthusiasts."

His diagnosis was correct; the profession does need enthusiasts and it needs examples like General Smith to fight against disparagement and discouragement. If to labor is to pray, his whole life has been a benediction. America mourns, with Great Britain, the loss of a great and good man.

P. A. F.

EDWIN H. HERRING

Dr. Edwin H. Herring, of Carthage, Ill., died July 28, 1929, following an operation performed the day before, for a kidney ailment, at St. Francis Hospital, Peoria, Ill.

Born near Perry, Ill., October 7, 1862, Dr. Herring attended country and Versailles public schools and the Chicago Veterinary College. He was a member of the class of 1892 at the latter

institution. He located in Carthage and built up a fine practice throughout Hancock County. He served for several years on the City Council as alderman from his ward.

Dr. Herring is survived by his widow, one daughter and three sisters.

LT. COL. CHARLES H. JEWELL

Lt. Col. Charles H. Jewell died at Hot Springs, Arkansas, August 1, 1929. He had been gradually failing in health since his retirement from active Army service, on January 27, 1923.

Born at Ithaca, N. Y., July 22, 1869, Col. Jewell received his veterinary education at Cornell University. He was graduated in 1900 and for a short time was located in Dunkirk, N. Y. He then entered the service of the U. S. Bureau of Animal Industry and was stationed at Kansas City. He entered the military service first as a cavalry veterinarian, July 27, 1903. His first assignment was with the 13th Cavalry, at Fort Meade, S. Dak. Three months later, he accompanied that regiment to the Philippines and remained there for more than two years. He returned to the United States in July, 1905, and immediately became an instructor in the Mounted Service School at Fort Riley, where he remained until June, 1912, when he was relieved and assigned to the Fifth Field Artillery, at Fort Sill, Okla. He remained at this station until January, 1916, with the exception of about six weeks service on the Mexican border during December, 1914, and January, 1915. His next assignment was to the Fourth Cavalry, at Schofield Barracks, Hawaii.

In November, 1917, he was promoted to Captain in the Veterinary Corps of the Regular Army and in a few weeks was ordered back to the United States and assigned as Division Veterinarian to the 80th Division, then at Camp Lee, Va. He was promoted to the rank of Major and went to France with his Division, in May, 1918. Upon the formation of the First Army Corps, Col. Jewell was made its chief veterinarian, and he thus became the first corps veterinarian in the military history of the United States. He remained with this organization until October, 1918, when, on account of his previous successes and recognized ability, he was selected to build up the veterinary service of the Second Field Army, which was being formed in the Toul sector, to advance on Metz.

Shortly after the signing of the armistice, Col. Jewell contracted influenza, which was then raging in France, and when he recov-

ered was assigned as Corps Veterinarian to the Ninth Army Corps with which he returned to the United States in 1919. After eight months in the office of the Surgeon General, at Washington, he became Officer-in-Charge of veterinary instruction at the Cavalry School, Fort Riley, Kans., serving in that capacity until his health failed again, when he was sent to the Walter Reed Hospital for observation and treatment. Two months later he was assigned to Camp Pike, Ark., as Division Veterinarian and served in that capacity until July, 1921, when he was sent to the Veterinary School in Chicago, from which he was graduated in December of that year. His final assignment was that of assistant to the Surgeon of the Second Corps Area and attending veterinarian of the New York Harbor Post. He served at this station until he received notice of his retirement and ordered to proceed home. He was retired on account of physical disabilities with the rank of Lieutenant Colonel.

Col. Jewell joined the A. V. M. A. in 1901. He is survived by his widow, one daughter and one brother. The highest military honors were accorded the deceased at the funeral services held in Junction City, Kans. Two troops of cavalry, a military band and a firing squad accompanied the body to the cemetery. A riderless horse, shrouded in black and with his saddle turned, followed its former rider to the grave, where members of the American Legion and the Masonic Lodge conducted services.

ICHABOD A. ROSENBERGER

Dr. I. A. Rosenberger, of Delphi, Indiana, died at his home, July 14, 1929, after an illness of ten weeks, caused by valvular insufficiency of the heart.

Born April 30, 1877, he attended local schools and the McKillip Veterinary College, from which he was graduated in 1912. He is survived by his widow and one daughter.

FRANK H. CARR

Dr. Frank H. Carr, of Lansing, Michigan, died at his home, August 19, 1929. Death was due to injuries which he received in an automobile accident about a week previously.

Born October 20, 1892, at Rushville, Ind., Dr. Carr attended local schools and then entered the Indiana Veterinary College, from which he was graduated in 1921. He was in the employ

of the U. S. Bureau of Animal Industry, engaged in tuberculosis eradication work, at the time of his death.

Dr. Carr had just completed his application for membership in the A. V. M. A. on August 1. He is survived by his mother, two brothers and two sisters.

Dr. Benjamin Meade Bolton, for many years one of the country's leading bacteriologists, died in New York City, August 13, 1929, at the age of 73.

Dr. Adam W. Bonebrake, of Kingman, Indiana, died at his home, August 1, 1929, at the age of 79. He had practiced in western Indiana for almost sixty years.

Our sympathy goes out to Dr. William C. Vollstedt, of Dixon, Iowa, in the death of his father, August 22, 1929, at Davenport, Iowa, after an illness of three weeks.

PERSONALS

MARRIAGES

Dr. R. R. Ormiston (Ont. '22), of Winnipeg, Man., to Miss Jessie Young, of Newdale, Man., June 29, 1929.

Dr. Eugene Alfred Rodier (Wash. '20) to Miss Grace Olive Baker, both of Manila, P. I., July 22, 1929, at Manila.

Dr. Clive Daly (K. C. V. C. '07) to Miss Fannie Graham, both of Birmingham, Ala., August 3, 1929, at Birmingham.

Dr. George M. Simmons (Iowa '25), of San Francisco, Calif., to Miss Lillian Saroyan, of Fresno, Calif., August 19, 1929, at Fresno.

BIRTH

To Dr. and Mrs. J. Lebish, of Bronx, N. Y., a son, Irwin, July 22, 1929.

PERSONALS

Dr. H. P. Conrad (Mich. '27), of Port Huron, Mich., is St. Clair County Veterinarian.

Dr. W. M. Dohrer (Iowa '20), formerly of Ayrshire, Iowa, is now located at Elkader, Iowa.

Dr. H. L. Morency (Colo. '25), formerly of Fort Collins, Colo., is now located in Boulder, Colo.

Dr. E. D. Martin (O. S. U. '11), formerly of Greenville, Ohio, is now at Reynoldsburg, Ohio.

Dr. R. L. Stevenson (O. S. U. '29) has located for general practice at 2331 N. Main St., Dayton, Ohio.

Dr. F. E. Anderson (Ont. '86), of Findlay, Ohio, was a patient in the Ford Hospital, Detroit, during August.

Dr. Charles R. McCoppin (K. C. V. C. '06) has removed from South St. Joseph, Mo., to Kansas City, Mo.

Dr. B. W. Conrad (K. C. V. C. '07), of Sabetha, Kans., has been seriously ill at the local hospital in Sabetha.

Dr. C. F. Berry (McK. '08), of Ottawa, Ill., broke his collar-bone recently, when he fell off a ladder at his farm.

Dr. T. G. Sprague (Ont. '21), of St. Boniface, Man., visited the Mayo Clinic at Rochester, Minn., during August.

Dr. Carl G. Vollmer (Ont. '13), of Toledo, Ohio, was elected a member of the Toledo Exchange Club, in August.

Dr. J. E. Severin (O. S. U. '16) has removed from Fitzgerald, Ga., to Decatur, Ga. Address: 343 South McDonough St.

Dr. H. E. Rice (K. C. V. C. '00), of Little Rock, Ark., has been able to return to his practice after a brief illness.

Dr. H. L. Caldwell (Ont. '17), formerly of the Health of Animals Branch, Winnipeg, is now located at Brandon, Man.

Dr. V. L. Bruns (Colo. '23) has been transferred from Dade City, Fla., to Live Oak, Fla., on hog cholera control work.

Dr. George Armstrong (Ont. '19), formerly of Rossburn, Man., is now located at Russell, Man., in general practice.

Dr. Eldon C. Barclay (Mich. '29) has accepted a position with the Gabel-Risdon Creamery Company, of Detroit, Mich.

Dr. James A. Muffly (U. P. '29), formerly of Watsonstown, Pa., is now at the Walker Gordon Laboratories, Plainsboro, N. J.

Dr. Ashe Lockhart (K. C. V. C. '15), of Kansas City, Mo., underwent an operation for appendicitis the latter part of July.

Dr. Earl D. McCauley (Iowa '29), formerly of Ames, Iowa, has accepted a position with the Board of Health of Sioux City, Iowa.

Dr. J. A. McPhail (Gr. Rap. '04), of Manistique, Mich., is planning to take over the practice of the late Dr. E. D. Shevalier, of Escanaba.

Dr. Raymond H. Aull (Iowa '15), of Dayton, Ohio, is planning the construction of a new veterinary hospital at an estimated cost of \$22,000.

Dr. N. D. Christie (Ont. '10), of the Health of Animals Branch, Winnipeg, with his family, has been on an extended holiday trip to California by motor.

Dr. G. W. Musselman (McK. '11), of Denver, Ind., suffered a loss estimated at \$1,000 recently, when his veterinary hospital was completely destroyed by fire.

Dr. C. E. Edgett (Ont. '06), formerly of the Health of Animals Branch, Winnipeg, has been appointed warden of the Penitentiary at New Westminster, B. C.

Dr. W. C. Glockner (U. P. '20), who is engaged in tuberculosis eradication work in Arkansas, spent his vacation at Gulf Port, Miss., during the latter part of August.

Dr. R. E. Hammond (Mich. '22), formerly of the Health Department, Dayton, Ohio, has accepted a similar position with the Health Department, Flint, Mich.

Dr. T. R. Robertson (McK. '16), of Dyersburg, Tenn., was bitten on the little finger by a dog which he was examining recently. The dog was suspected of having rabies.

Dr. S. J. Schilling (O. S. U. '17), who was at the University of Arkansas, Fayetteville, for a number of years, has gone to the Alabama Polytechnic Institute, Auburn.

Dr. M. T. Lewis (St. Jos. '23), of Stonewall, Man., has been appointed Assistant Pathologist at the Manitoba Agricultural College, to assist Dr. A. Savage (Corn. '14).

Dr. J. Y. Veenstra (McK. '07), of Grand Rapids, Mich., has been appointed Director of the divisions of Meat, Food and Milk Inspection, which were recently consolidated.

Dr. L. D. Bashore (Cin. '15), of Paulding, Ohio, recently underwent an operation in St. Joseph Hospital, Fort Wayne, Ind., for the removal of his appendix and gall-bladder.

Dr. E. W. Rackley (U. P. '28), formerly of Waycross, Ga., has removed to Charleston, S. C., where he is now associated with Dr. B. Kater McInnes (U. P. '11) in general practice.

Dr. G. A. Metcalf (U. S. C. V. S. '08), of Knoxville, Tenn., was appointed a member of the Tennessee State Board of Veterinary Medical Examiners, by Governor Horton, on August 17.

Dr. L. D. Barrett (O. S. U. '25), formerly associated with Dr. S. E. Young (O. S. U. '17), of Pittsburgh, Pa., has opened a new small-animal hospital at 711 James St., N. S. Pittsburgh, Pa.

Dr. R. F. Dean (Chi. '06), of North Salem, Ind., has been elected Vice-President of the Indiana State Live Stock Sanitary Board, succeeding Dr. C. F. Mummert (Ind. '07), of Logansport.

Dr. D. E. Madsen (Colo. '28), who was with the Pennsylvania Bureau of Animal Industry, at Harrisburg, the past year, has resigned to accept a position at the Utah Agricultural Experiment Station, Logan, Utah.

Dr. L. D. Mersch (Iowa '28) has resigned his position with the Sioux Falls Serum Company, Sioux Falls, S. Dak., and has accepted a position at the American Society for the Prevention of Cruelty to Animals Hospital, in New York City.

Dr. H. Van Roekel (Iowa '25), who has been with the California Fish and Game Commission, located in San Francisco, has changed positions and is now at the Massachusetts Agricultural College, Amherst, in the Department of Veterinary Science.